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ar139 Disclosure Featuring Lyons Architecture, John Wardle Architects in collaboration with NADAAA, Woods Bagot, Elenberg Fraser; Under Construction with ASPECT Studios and CHROFI, Christchurch On Trial, Undercover Architects: the Deceptive Face of Frontline Practice

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POSTVIEW

In the words of Barry Bergdoll, in his interview, what kind of architecture 'would either be a resistance to the status quo or would seek to be the leading edge of some critical activity?' Bergdoll's conversation sets a promising tone for the issue, but he also sets out a warning, a call to 'counteract architecture's own self-destructive tendencies: to save it from vague defeatism'. This admonition is paralleled by Ben Hewett's call for clearer communication of how and why architecture has value, in terms that people outside the discipline will understand: 'The value of communicating simply and effectively is paramount and until we're able to discuss our value collectively in those terms we need to stop complaining about those not recognising our importance.'

AR138 is distinguished by the presence of 'marginalia' – notes from commentators making critical asides in the margins of the body text. The idea is appealing: multiple voices all at once, a kind of polyphonic spree undoing the usual monophonic voice of a single-authored text. But does it work here? It's hard to mount a considered and evidenced argument in one or two sentences, so some of the marginal notes are pot shots more than entries in a reasoned dialogue. Also, interestingly, the margin notes appear almost entirely in the sections dedicated to feature essays and interviews – not the project reviews. It would have been interesting to disagree with a critic in their assessment of a building. For example, to press Anna Johnson on her (arguable) proposition that McGauran Giannini Soon Architects' New Generation Bendigo Library has missed the opportunity to act as 'a more defining, ambitious example of what architecture could be in a regional context'? The selection of Johnson's article alone is simply a case point – it is the critic's right and prerogative to advance a considered judgement and hers is coherently put. It just so happens in this case I think she's wrong and such genuine disagreements are the heart of critical discourse. I'd like to see Johnson refute my position in turn.

Nevertheless there are numerous happy correspondences across the issue. Marissa Looby's hint that architects might make more money working in *Minecraft* than they do in real world practice plays well against Clare Sowden's compelling feature essay, 'The Machine That Makes Land Pay', which reflects on the relationship between (profit) margin and architecture. Here we see how all that is solid melts into air: that house you thought you were buying, those tangible bricks and mortar, is actually not a thing at all but an abstract relationship between debt and equity, a 'tradeable, securitisable asset', which can be converted, via real estate, into capital and back again. The architect may be an accessory or functionary in this process, but is rarely the one who receives the reward.

Stephen Loo sees a ray of light for the profession in In Conversation – that 'architecture is central within an emerging economic paradigm, that of the creative experience economy'. But both the optimism and considered tone of his contribution stand in contrast to Austin Williams' impassioned 'Less is Less', a feature essay that is enjoyable despite (perhaps because of?) containing a number of preposterous statements. Is it really true that 'the [architecture] profession views free choice as a hindrance and controls as creative freedom'? I think not, or not always, but such moderation spoils the polemical broth, and since this essay is clearly offered in the hyperbolic spirit of a Futurist manifesto, then OK, let the good incendiaries with charred fingers come. What else are margins for, if not contention, controversy and critique?

Naomi Stead

Should we really hide the medicine in the mashed potatoes – as per the Preview to this issue (in AR138–Margins) – to persuade the discipline to look at its critical and pedagogical approaches? Are facts and information scrupulously concealed, preventing full disclosure in procurement and contractual aspects of the profession? Is contemporary society hell-bent on the immediate shorthand version of events or commentary, rather than advocating for something, anything?

Where AR138–Margins sought to locate disciplinary parameters in order to establish the conditions by which problems are made stark, AR139–Disclosure is entirely contrasting. AR138 suggested the profession is marginalised, wallowing in the fact that architecture is driven by the bottom line and that Modernism reigns in marginalia. AR139 has an investigative focus, highlighting why the profession is marginalised by a lack of disclosure at every level. Margins and Disclosure, then, are disparate twins.

AR139–Disclosure looks at how we perceive our role and our work. The practice of architecture requires its own full disclosure of the facts, to scrutinise our own methods or approaches, to evince critical commentary that moves away from studied indifference. We should actively encourage rather than dissuade.

If there is an unwillingness to critically discuss architecture or to willingly engage in decision-making then architecture must seek strategies to rectify this. In 'Undercover Architects: The deceptive face of frontline practice' (p036) **Alysia Bennett** pertinently asks: 'Given that our current architectural scene is plagued with political and regulatory constraints…could these issues be overcome through a deliberate misrepresentation of objective? Does architecture have to disclose its intentions and, what happens if an architect deliberately sets out to deceive?' So, is it methods of practice or the language used that can shift the mindset? Indeed, **Clare Sowden** notes that the phrase 'design thinking' has been coopted by the business world, which 'elevates the importance of process and creates new problem-solving frameworks' (p028). In turn, Sowden believes architects must draw on their training and see the professional field as an opportunity rather than a predicament, allowing the figure of the architect to be in 'a unique position [when facing] the complexities of city-making'.

City-level decision-making is at the core of the issue, notably the intensifying problem between public–private space and its disclosure. In 'On Trial: Closure / Disclosure: Christchurch City After the Quakes' (p024) **Barnaby Bennett** outlines Christchurch's ongoing recovery following a series of earthquakes that destroyed large parts of the city. He identifies 'two contrasting forms of closure and disclosure [that] can be seen operating across the city', where 'closure can be understood as a process in which it is claimed things are contained and under control; and disclosure is a process in which previously hidden things are revealed.' The concealment of information is not unfamiliar territory for architecture. In the construction of the dome of Santa Maria del Fiore, Filippo Brunelleschi chose not to disclose his plans to the builders, but such authorial control proved impossible, as it required the architect to be on-site throughout construction. As such, Leon Battista Alberti suggested the architect should 'provide builders with notations to be executed faithfully in the architect's absence'. The advent of collaboration?

Currently, the profession holds a curious understanding of 'collaboration' – it possibly even glorifies a weakened definition of the role of the architect. The practice and culture of architecture is commoditised in the wake of collaboration. But in 'Collaborative Commons, the latent potential' (p030) **Claire McCaughan** identifies that our 'patterns of consumption are changing, shifting from ownership to use' and that 'architecture is already acting latently within the developing social and economic order of collaborative commons; however, we are not making the link between the profession's work and this highly impactful system'.

Project reviews include **Woods Bagot's Nan Tien Institute and Cultural Centre** (p044), **John Wardle Architects in collaboration with NADAAA's Melbourne School of Design, the University of Melbourne** (p068) and **Atelier FCJZ's Vertical Glass House** (p076). Our **Under Construction** feature is **The Goods Line by ASPECT Studios with CHROFI** (p020). The issue is flanked by a revisit to the unprecedented edition of re-reviewed content in AR138–Margins in **POSTVIEW** (p008) and a look forward in **PREVIEW AR140** (p098), which promises to be a similarly unique edition.

Michael Holt
Editor
Architectural Review Asia Pacific
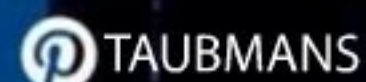From concept to completion.

ar139 Disclosure

ar139

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ar Architectural Review Asia Pacific

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BIM Design

Realising the Creative
Potential of Building
Information Modelling
(AD Smart Series)

Richard Garber
Wiley Publishing, 2014
Hardcover • 248pp • $50.00

The dedication at the front of the book best describes its cause and is a curious reflection on the profession: 'For the people of the world who are suspicious of the digital...' It is a statement on the architect's contemporary position, whereby Building Information Modelling (BIM) is proposed to shake up design and delivery processes and to redefine the construction hierarchy.

BIM Design: Realising the Creative Potential of Building Information Modelling, a follow-up to the author's guest-editor slot for *Architectural Design's* 'Closing the Gap' issue (Volume 79, Issue 2, March/April 2009), is a high calibre collaboration. The effective use of projects illustrates the creative application of BIM – diagrams, screen-grabbed stills and construction, and fabrication photography show the iterative quality brought to each project. At first glance it would seem it operates as a showcase of work from SHoP Architects, Morphosis, Populous, GRO Architects, Reiser + Umemoto, Gensler and UNStudio, but it is in its reading that the book begins to explore theoretical and historical territories that bolster the overall argument.

Perhaps the most significant chapter is from SHoP, focusing on its Barclays Centre, tellingly entitled 'Architects, control and construction'. The practice take on the risks associated with construction projects and, as such, has begun to change the shape of the profession – offering services normally outsourced by architects. It is a simple and ingenious move, providing greater authority to the architect. As it notes, 'SHoP's hands-on approach to building construction differs greatly from the way architects have operated in the last 500 years, in which a set of two-dimensional documents is created to be interpreted by others, which is many times "value engineered" after construction documentation is complete. The practice began to regularly produce shop drawings or fabrication quality documentation early in the design process to bring cost certainty to their work and to deliver a level of comfort to their development partners while producing novel designs.' It seems SHoP really is 'realising the creative potential' of BIM.

In returning to ground Garber covered in 2009 it shows how little the industry has truly taken to the potential of digital technologies. Auspiciously, the arguments in this arena are intensifying. With each step taken towards swaying the stragglers to retreat from convention and embrace digital, the profession edges closer to rethinking the processes and methods deployed on a daily basis in the design and produ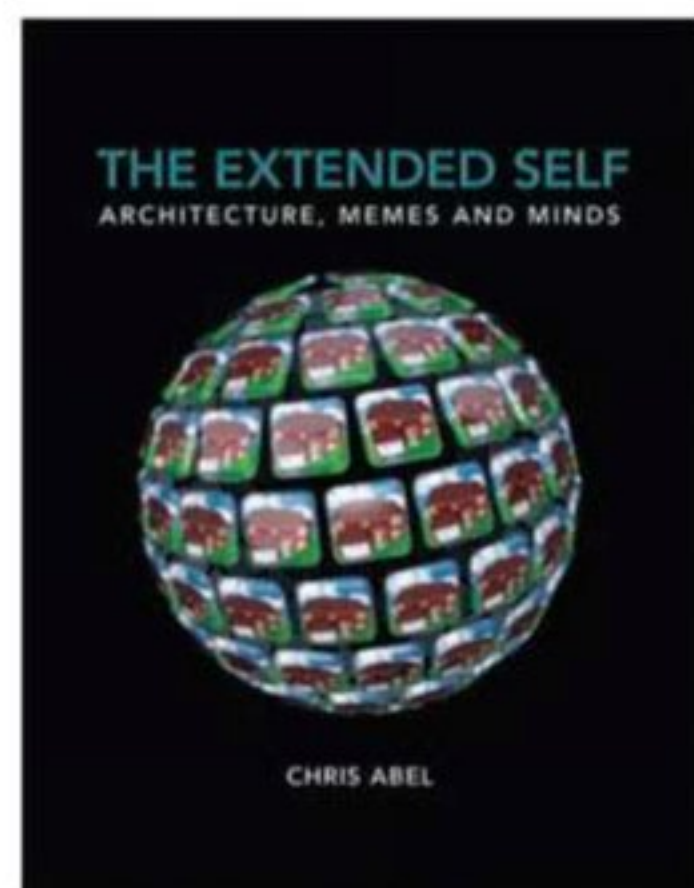ction of the built environment. The suspicion that exists in those not adjusting to the digital stagnates the discipline's potential advancement; this book strives to release the profession from the shackles of conformity. **ar**

The Extended Self: Architecture, Memes and Minds

Chris Abel
Manchester University
Press, 2014
Paperback • 416pp • $40.00

Chris Abel is an established author specialising in architectural history, theory and criticism, who first came to international prominence with a series of essays published in *Architectural Design* in the 1960s and 70s. The essays explored self-organising urban systems and computer-based methods of flexible manufacture. He later immigrated to Australia, sponsored by the late Harry Seidler, returning to the UK just last year.

In *The Extended Self: Architecture, Memes and Minds*, Abel is typically varied and obtusely taxonomical. It is a quirky and inclusive plethora of ideas and cultural referent; indeed to note British tennis player Andy Murray alongside phenomenological philosopher Maurice Merleau-Ponty and polymath Michael Polanyi is nothing short of outstanding! However, none of the references or precedents is without reason, they each help describe a number of well-honed points – albeit rather Postmodern in their positioning and encompassing nature. This book seems an extension of the back catalogue of ideas proposed in book form and at design studios throughout Abel's career. For instance, the notion of 'tacit knowledge' was first outlined in Abel's *Architecture and Identity* (2000) but returns here, comparing the terms of tacit knowledge to work of 'the novice scientist [who] immerses himself or herself in the exemplary experiment or project as the proximal term of tacit knowing, by which he or she "enters into" a whole body of knowledge (the very phrase itself has suggestive connotations), that is, the distal term, which would otherwise be inaccessible.'

The book is a thoroughly wide-ranging study of architecture and cultural evolution; Abel argues that underlying the global environmental crisis is a general resistance to changing personal and social identities shaped by a technology-based culture and its energy-hungry products. The book traces the roots of that culture to the co-evolution of Homo sapiens and technology, from the first use of tools as artificial extensions of the human body, to the motorised cities spreading around the world, the uncontrolled effects of which are changing the planet itself.

Advancing a new concept of the meme, called the 'technical meme', as the primary agent of cognitive extension and technical embodiment, Abel proposes a theory of the 'extended self', encompassing material and spatial, as well as psychological and social elements.

Drawing upon research from philosophy, psychology and the neurosciences, the book presents a new approach to environmental and cultural studies that will appeal to a broad readership searching for insights into the perceived crisis. **ar**

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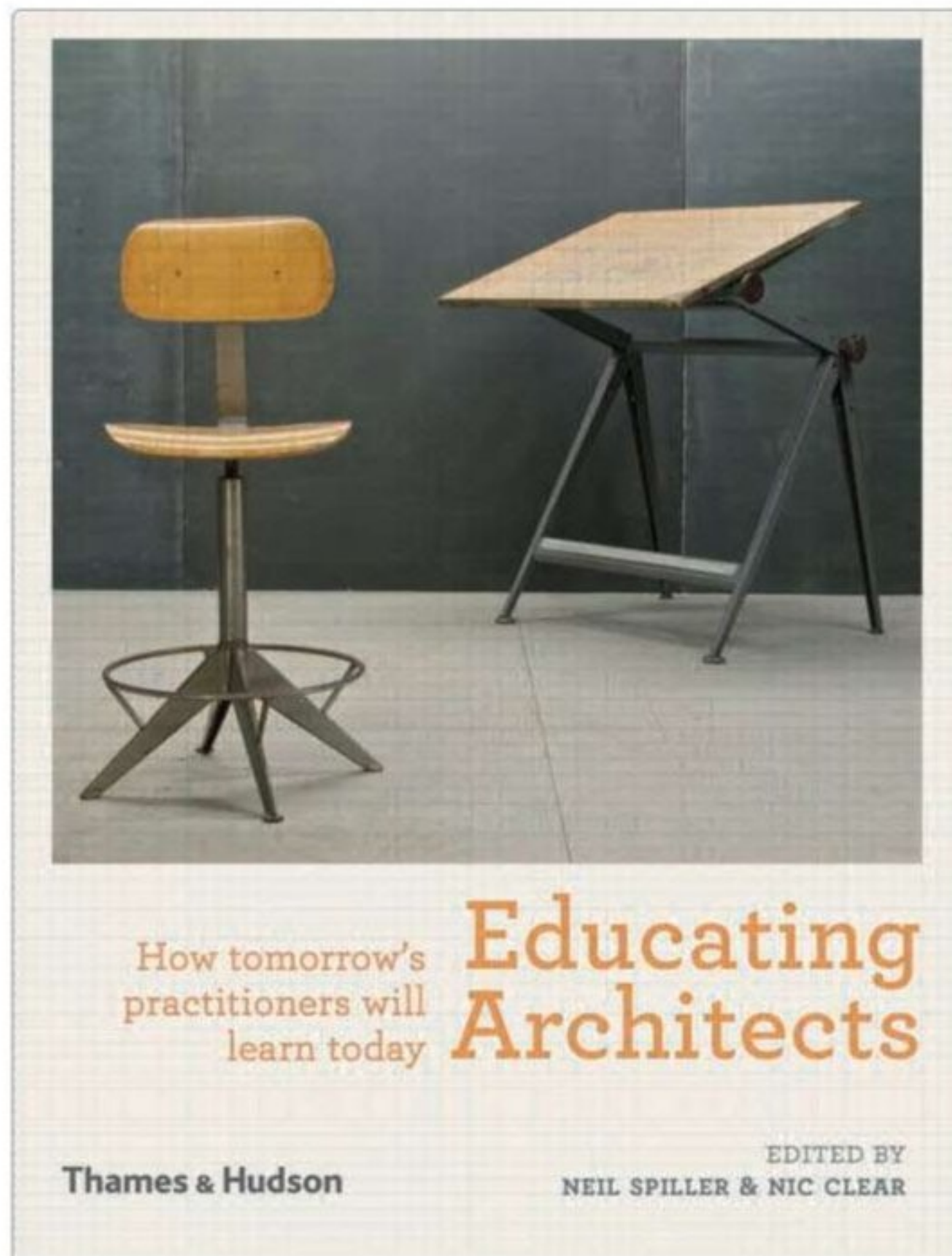
Educating Architects: How Tomorrow's Practitioners Will Learn Today

Edited by Neil Spiller and Nic Clear
Thames & Hudson, 2014
Hardcover • 352pp • $50.00
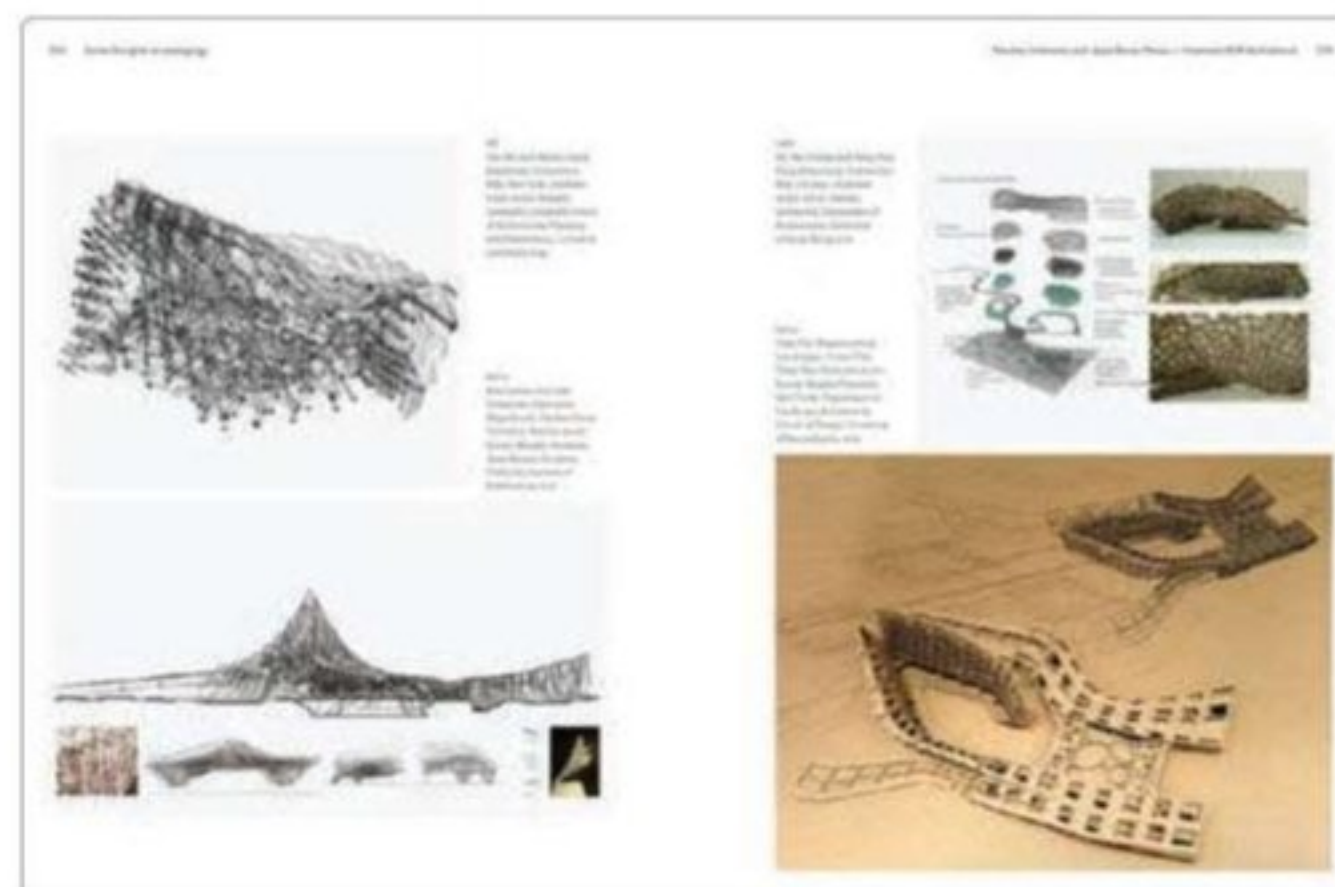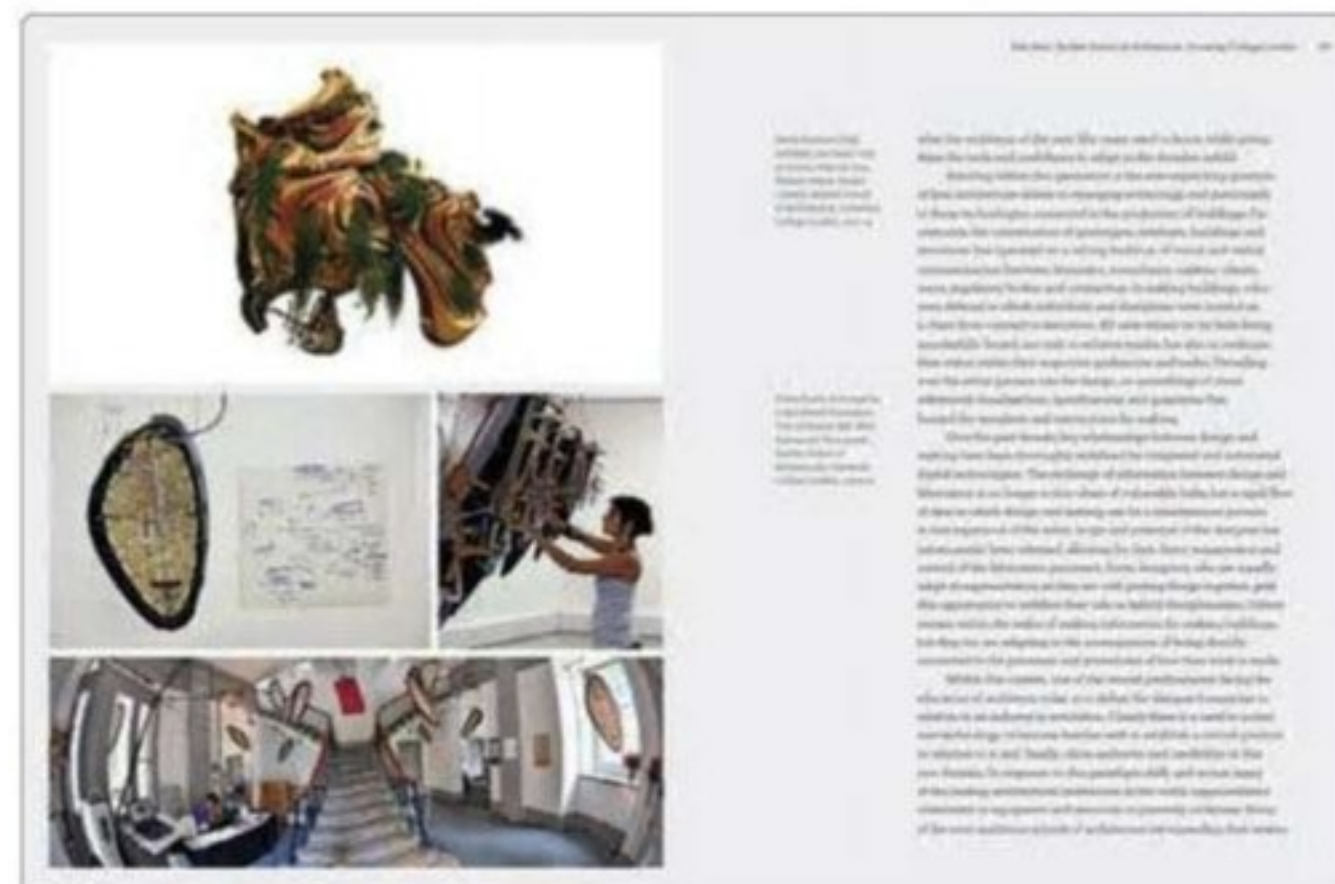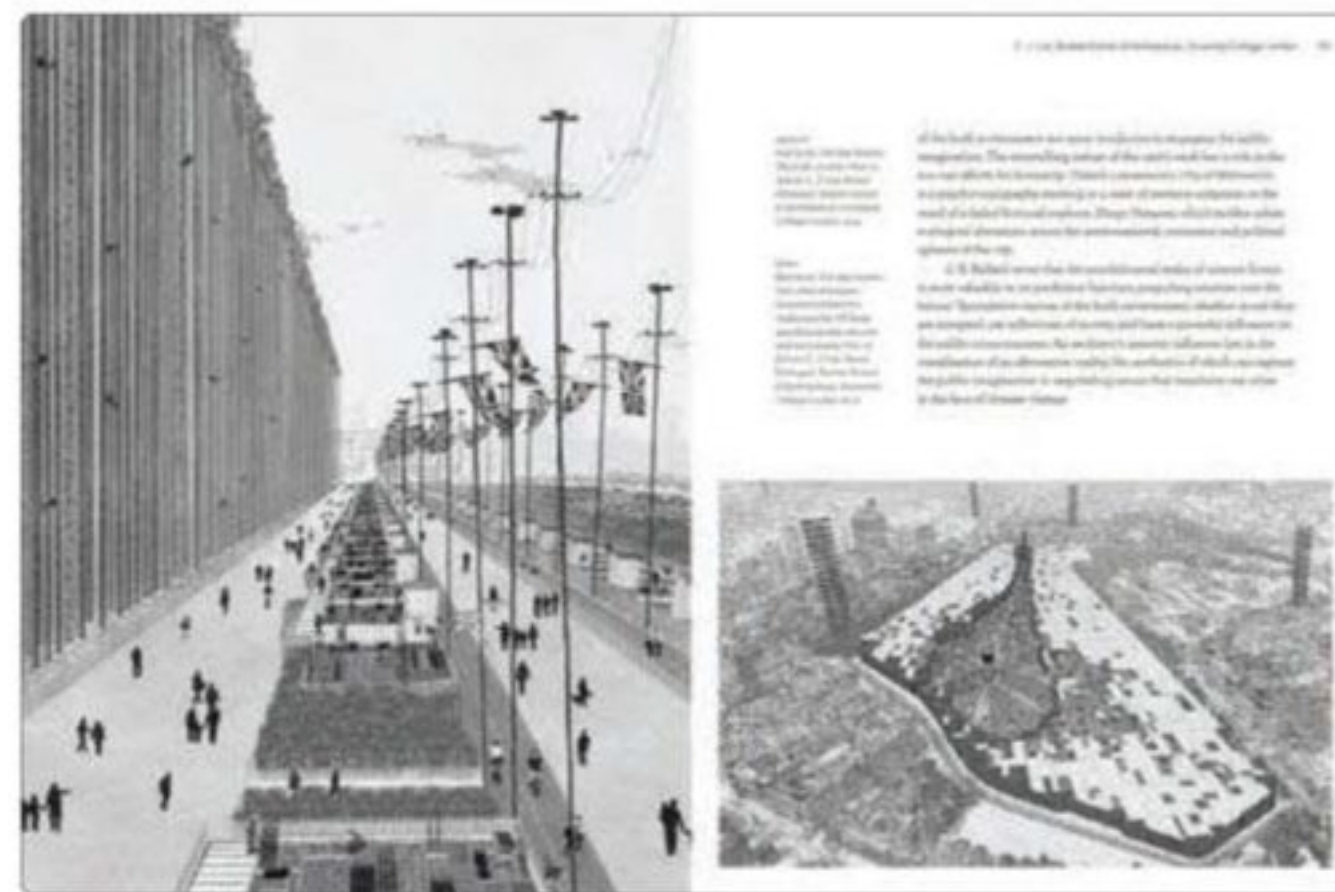
There is no doubt what constitutes an architectural education or, more bluntly, what it is that architecture students 'must learn', has been widely debated for much of the past fifty years. Apart from the inevitable and varied discourses on design and theory, in more recent times discussions have focused on possible futures of architectural practice, means and modes of representation, globalisation and sustainability, and the agendas and positioning of research in the broader context of architecture and the academy.

In *Educating Architects*, editors Neil Spiller and Nic Clear, respectively chair and head of the Department of Architecture and Landscape at the University of Greenwich, collate a series of essays and writings that in one way or another refer to all of the aforementioned factors. Spiller quickly debunks any preoccupancy with form generation and identifies that the best studios, projects and schools embrace 'the wider picture of architecture's social, political and cultural aspects'. Springing from this point, and in their attempt to provide a comprehensive picture of how students are being prepared for the future profession, Spiller and Clear tackle →

→ their subject by engaging with a range of viewpoints and players – academics, educators and practitioners.

On the surface, the book appears to successfully avoid presenting the agendas of a singular approach or position. Further, Spiller in his introductory essay unabashedly points out the undeniable effect of external pressures on both the administrative frameworks and curriculum content upon which architectural education depends. For anyone involved in the academy over the past decade, outside factors as varied as the Bologna Process, the rise of parametricism and the global financial crisis pretty quickly spring to mind.

Educating Architects presents a wide variety of studios and teaching approaches and places these alongside the interplay of the internal and external factors identified above that independently and in concert have had and continue to have a very real effect on architectural education. But, in spite of the enormity of some issues, the extent of their effect on what is taught in architecture schools, and how they shape the current curricula, remains largely obscured to most practitioners. This is primarily because of a lack of accessibility in the relevant information, sometimes exacerbated by impenetrable academic writing, but is also due to a lack of disclosure to the profession because of a perception that it is disengaged or disinterested in architectural education. Instead, within the bounds of practice, architectural education is usually judged by that most blunt of tools, the 'work readiness' of the newly minted graduate.

Many of the book's contributors combat this irksome obsession of the architectural profession with articulate and thoughtfully positioned essays, particularly those by Clear Architects, Mohsen Mostafavi (Harvard), Salomon Frausto (TU Delft), Mark Wigley (formerly Columbia), Ben Nicholson (Art Institute of Chicago) and Brett Steele (Architectural Association, AA).

However, regardless of the inspirational student work and the quality contributions by academics and practitioners alike, *Educating Architects* is seriously thwarted by several weaknesses. Firstly, although the editors trumpet that this collection embraces perspectives emanating from differing educational paradigms, upon closer inspection this claim seems tokenistic. Without wishing to denigrate any of the writers from the editor's own school, the book is overly laden with essays from the University of Greenwich,

bringing an unfortunate taint of convenience and nepotism. Related to this is that many of the writers profess a current or past connection to the AA and the legendary unit system – which is not at all to say that the AA has no place in a book on forward thinking architectural pedagogy, but rather that the book's mandate is apparently staked as being much broader than the modus operandi of one institution.

Another failing of *Educating Architects* is the inclusion of some seriously indulgent writings that bear little to no adherence to the topic, instead masquerading as quasi-poetic ramblings or self-promotion pieces, serving no purpose but to take away the possibility of including other more worthy and relevant contributors and even possibly redressing the distinct lack of gender balance in the writer line-up.

Such editorial preferencing brings with it several additional lost opportunities. Schools from the US and the UK feature heavily, with only a smattering of European and Asian schools selected and RMIT the lone dweller from the southern hemisphere. Again, this could be unintentional, but perhaps the appeal of the book depended on a critical mass of known names and, with that, comes a geographic prejudice.

Beyond this, the book also either sadly ignores or wilfully excludes any free ranging discussions on other innovative schools, approaches and educators, such as those pursuing travelling studios, the establishment of satellite schools, design-build studios or community engagement and social action-oriented studios. There is not a single piece written by an individual situated outside of conventional institutional structures – no mentions of Strelka, Confluence or the like.

Lastly, although Clear states, 'This profession has much to gain from an expanded sense of architectural education...' it is a great pity that in publishing a book on this very topic (a rare event in and of itself) the editors could not find it within their remit to create an era-defining text that might bring the discipline and profession of architecture to a closer relationship with the academy. Having said that, while the book falls short of becoming a compulsory text, it certainly provides a way in for the wider profession to become more informed about what its future may be and, on this basis, *Educating Architects* is a genuinely encouraging and readable book for all comers to the topic. **ar**

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01

The Goods Line North and South
SICEEP development
The Goods Line shared cycle and pedestrian way
Continuation of the Goods line in tunnel
Possible extension of the Goods Line
Existing cycle ways in proximity to the Goods Line
Key site links
City of Sydney link opportunity

KEY NODES ALONG THE GOODS LINE

1. SICEEP / Powerhouse Museum
2. Mary Ann Square
3. UTS
4. Thomas Street
5. Devonshire Tunnel
6. Central Station
7. Cleveland Street
8. Redfern Station

02

03

04

The Goods Line, Ultimo Pedestrian Network

ASPECT STUDIOS WITH CHROFI FOR SYDNEY HARBOUR FORESHORE AUTHORITY

With precast planks being fixed on-site over the holiday season and heading for an early 2015 completion for the first northern section, the Goods Line in Ultimo, Sydney sits between urban typologies of street and park and is best described as cultural infrastructure. 'It was a social project before it was a design project,' comments Sacha Coles of ASPECT Studios, (project lead and landscape architect) who, with CHROFI (design partner and architect), has designed and championed the project.

The aim of the Goods Line is to unlock the neighbourhood, becoming a pivotal axis in the creative precinct that is now defined from Pyrmont, through Ultimo to Surry Hills. For a relatively small budget in city terms, this project comes loaded with civic ambition and public purpose – a rarity in any project, let alone a public project in an age of PPP. As such, each precast plank, each light fitting, planting and lug cover has been intimately designed with the design team putting in many more hours than the AUD$9 million budget would suggest.

From the start the project has been a complex one. Firstly, there are a large number of high profile stakeholders involved, including the University of Technology, Sydney, the Powerhouse Museum (formerly the Museum of Applied Arts and Sciences), TAFE, ABC, TransGrid, NSW State Rail, the City of Sydney and the client, the Sydney Harbour Foreshore Authority (SHFA), which have all in some way taken a sense of ownership of the project. One of the remarkable things about this project, unlike other high profile projects in Sydney recently, is that the participatory design process leading into the project has galvanised all these bodies that have come to understand their substantial institutional benefits through investment that is first and foremost public. Enlightened.

The second complexity follows from investment that has expanded the project to include researching and developing a model for the governance of the space on completion, by Right Angle Studio and ASPECT Studios, with the assistance of the Hornery Institute and the Future Laboratory, specifically for this project. As a prototype urban space, the Goods Line brings to life issues around the processes of its social, cultural and economic sustainability in the long term and the 'soft design' or programming elements that are at least as significant and challenging in design terms as the physical space itself. With the Institute for Sustainable Futures engaged to undertake one-, three- and five-year post-occupancy evaluations and 'collect the data' that will inform the governance strategy, a newly formed urban curator role central to the Goods Line's success, will benefit from hard information on the urban benefits of good design.

The northern end of the Goods Line is another area of 'necessary' scope creep, pushed for by the design team as the project developed. This area, wedged between the Powerhouse Museum and its archive in the Harwood Building to its south, where the overhead pedestrian bridge has recently been removed, is a natural connector to Darling Harbour, but was not included as part of the original scope. The success of the at-grade pedestrian connections the Goods Line makes for the precinct is fundamental to the dynamic of the project.

Running along the eastern edge of the site is where the ambitions of cultural infrastructure meet the physical infrastructure of the city in the form of a high voltage power line owned by State Rail. The HV line powers the city circle trains and, at first, required a two-metre clearance zone, which would have →

01. Render view along the Goods Line, looking north
02. South plan outlining the shifting nature of the landscape form
03. Urban strategy showing possible extension of The Goods Line
04. North plan with its greater amount of hardstand for pedestrian usage.

05
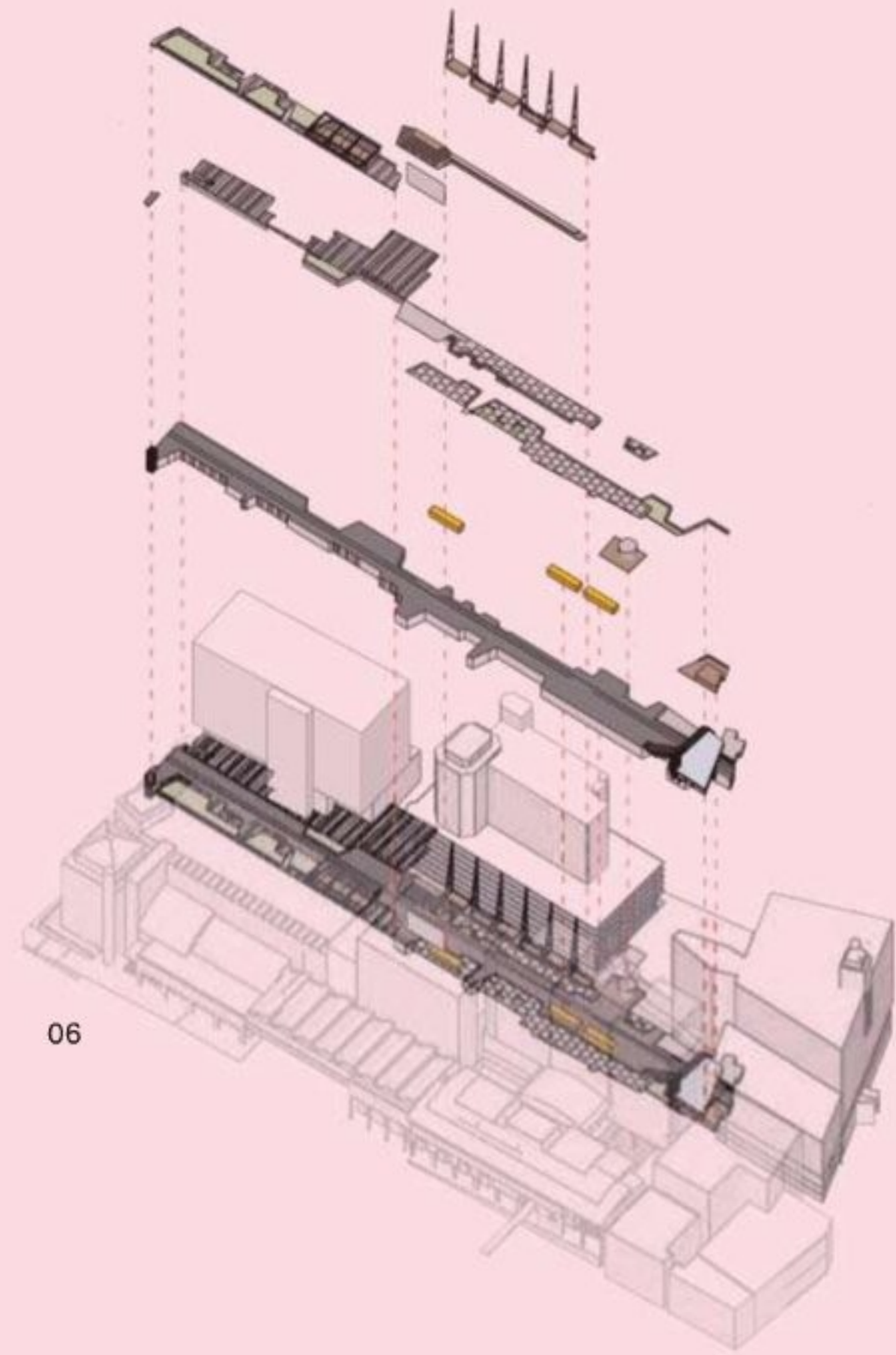
06

07

08

09

→ essentially cut the project in half lengthways and had to be negotiated around. Made more difficult by successive State Rail restructurings, some unusual responses to the 'no-digging' restriction, such as vacuuming the soil from around the cable, became necessary. In this regard the unusual precision of the construction process, more reminiscent of cabinetry design tolerances than two- to three-tonne urban infrastructure, required careful consideration of details not typical of a landscape project and a great deal more attention to site preparation than usual.

Around 500 precast concrete planks make up the hardscaping and define the strategy for the scheme. The elements all work double duty in setting the space through their dimension and various edge details, which suggest and support the programmatic range of the space, from outdoor cinema to impromptu classes, while recalling through their detailing a memory of the rail infrastructure of the past.

There are some demanding deadlines pressuring the project, such as the NSW State Election in March 2015 and the opening of the highly publicised Dr Chau Chak Wing Building by Frank Gehry for the University of Technology, Sydney, which closely knits into the project. The Transformer Building at the northern end of the site, while an integral element of the project and the only programmable internal space, has become the first victim of this

pressure, delayed both for budget and scheduling reasons, with a temporary pavilion by Tomek Archer going in as a placeholder. More importantly, the Goods Line will not feel complete until the next stage at the southern end is finished, south of the historic rail bridge over Ultimo Road, none of which has budget at this stage.

The Goods Line is distinct in its ambitions and use from the High Line in New York, which has become too easy a referent to really understand this project. As a client, SHFA should be commended for its ambition for this unique urban space and the development of a long-term vision around its contribution to the city. With the ASPECT Studios and CHROFI design team it has, however, created a powerful momentum towards stage two and for a new form of urban cultural space and process along the way. **ar**

05. Sections showing footpaths, rest areas and casual seating areas, shifting levels across the site
06. Exploded axonometric (north plan)
07. Hardstand construction on site
08-09. Renders showing the different activities on site throughout the day.

Closure / Disclosure: Christchurch City After the Quakes

A s Christchurch recovers from a series of earthquakes that destroyed large parts of the city four years ago, two contrasting forms of closure and disclosure can be seen operating across the city. Closure can be identified when examining how contemporary organisations attempt to control public narratives. Concerned communities and publics act in ways that transcend these restrictive strategies: opening up discussion and action, a process of disclosure. These two modes offer an instructive lesson in how architects might reconsider notions of activism, specifically in relation to critique and education.

Closure can be defined as the equivalent of stating 'nothing to see here'; it is the resolution of something previously contested or controversial. Claiming closure is a political activity that is not necessarily the same thing as achieving it.

Disclosure is not quite the opposite of closure; it is the specific act of releasing significant or relevant information that is in the public interest and might change behaviour. To disclose is to 'allow (something hidden) to be seen'. (*Oxford Dictionaries*, 2014)

In the context of Christchurch, closure can be understood as a process in which it is claimed things are contained and under control; and disclosure is a process in which previously hidden things are revealed.

There is plenty of evidence that the government in Christchurch is using a political strategy built on the non-disclosure of information about the design and planning of the new post-quake city to keep controversy and debate to a minimum. This is a form of attempted closure, to shut off debate for political benefit.

Exhibit A: A multibillion dollar blueprint for the new city, which has no international peer review or iterative public consultation.

The plan that determines the layout of the new city was developed in secret over 100 days and became law the day after it was launched in mid-2012.

Exhibit B: A $500 million convention centre that is being built on the two most important blocks in the middle of the city. It requires NZD$284 million of public money and there has been no public consultation, no release of the associated business plan and no public release of the design brief.

Exhibit C: A NZD$100 million public park along the Avon Ōtākaro River, which winds its way through the central city, is being reimagined and redesigned with almost no public consultation.

Exhibit D: There have been various submissions and competitions as part of the eighteen large projects that constitute the city plan. With just one exception, all alternative proposals have been kept from the public. For example, the Earthquake Memorial is shortlisted to six entries now, with only the winner released to the public.

The people of Christchurch have experienced a large collective trauma and it is deeply problematic to deny that public a meaningful and ongoing role in the reimagining of their city. This denial seems to be motivated by a political desire to control the rebuild narrative and deliver projects with a minimum amount of public discussion or controversy. Little or no value is given to the positive role that the discussion, public knowledge and public support can offer to a project. With billions of dollars worth of projects on the line, the architecture profession has, understandably, remained quiet about this strategy, preferring to instead keep their heads below the parapet and work behind the scenes.

None of this should be particularly surprising. The government and other interested groups, such as architects, are making rational

decisions that retain their power and bring in work, drawing upon their skills and judgement, as well as their (ideological) understanding of cities, design and development.

However, if one is concerned about issues such as the privatisation of the public sphere, transparency, community engagement, or if someone who believes that there is within the public enormous knowledge and capacity, then Exhibits A to D should strike you as very problematic.

Beyond the various attempts by governments and institutions to place closure on post-quake controversies, there is a significant form of disclosure that is a potentially more fruitful way of reframing these problems.

When things broke down in Christchurch, many of the processes and networks that hold the city together were revealed. This was when water stopped flowing out of the taps and was delivered in trucks, the sewerage system broke and the neighbourhood shared portaloos. The schools were damaged and students from different schools used buildings in two shifts. Over this period, people were excluded from planning activities and they started building informal structures in the city. This disclosure of urban functions, and the informal creation of structures, brought underlying problems to public attention.

Since the quakes almost four years ago, people have become mobilised by many issues and concerns: loss of heritage, school closures, overlapping governance agencies, lack of participation, insurance, geotechnical information, land rezoning, density, planning, design and many more. Each of these problems is produced from, and produces, forms of disclosure that reveal new information. These forms of disclosure facilitate complex discussions and sophisticated discussions – in public – about the city.

The idea that the networks that construct the world are made visible during controversy and crisis has been clearly articulated by philosopher Bruno Latour. After closely examining the way that scientific fact is made, Latour called for a shift from 'matters of fact' towards what he calls 'matters of concern'. He argues that a more productive type of critique is enabled when the concerns that people gather around are foregrounded.

Even though the damage was temporary, the sudden breaking of systems and infrastructures disclosed the issues important to the city of Christchurch. 'Where does our waste go? Where do we source clean water? How do we house the population? Where should people learn? Should we use this opportunity to anticipate the impacts of climate change?'

These are not questions answered by matters of fact, but rather are formed around objects of concern that act to collectively make up the histories of our cities. In normal times they are problems that obedient technologies give us the freedom to not think about, they are made invisible by 'good government' and stable urban infrastructure. →

→ The government is inevitably interested in the closure of these types of discussions as it wishes to maintain status quo and predictability that capital investments and political cycles require.

However, the public is mobilising for further disclosure. People have gathered in various forms to create publics around these issues: submissions, protests, community groups, non-governmental organisations, lobbying groups, design projects, websites, media releases, publications and endless meetings. These acts not only disclose the concerns of the people of the city, but also reveal the complex infrastructure that keeps the city working.

Because the government has demonstrated unwillingness, or a lack of capacity, to confront the questions raised by the disclosure of information, various publics have formed as a kind of prosthetic addition. An example is an annual Festival of Transitional Architecture that celebrates the many forms of temporary and provisional activity in the city each October. For the past three years, hundreds of students from architecture and design schools throughout New Zealand and Australia have contributed to this event.

A community collaborative called the Avon-Ōtākaro Network was created to facilitate public involvement in the planning of the area along the river, where 10,000 houses have been demolished. Local residents' associations have sprung up to represent previously unarticulated communities, with a representative body, Cancern, formed to lobby various government agencies.

The Food Resilience Network – consisting of volunteers, health professionals, small businesses and farmers – was established to support local food growing and alternative food distribution systems.

Although these examples differ in their methods and concerns, a shared characteristic is that they are not just reactive or negative responses to government agencies and to power-holders. Instead, these publics work to open up discussions and address

controversies, with their actions pointing to a more positive (potential) consequence of the earthquake.

The roles of critique and education shift substantially if they follow this reframing. Critique can be understood as a process of investigation and inquiry, instead of deconstruction and negation. It becomes a process in which the tools of inquiry are used to follow actors, to tell stories and to construct histories. From these constructions, strategies and devices can be carefully tested and deployed.

Education takes on a more active role in this context. Students are encouraged to find controversies within their own worlds and work towards understanding the various forces, agencies, systems and technologies that produce them. The difficulty of this approach, for education, is that it opposes the risk-averse and contained manageralism that currently dominates universities. Instead it leads to a call for the kinds of 1:1, live project, outreach strategies and their associated pedagogical approaches. This reframing calls for a return to concerns and a re-engagement with tangible and real issues of the various publics in the world.

The conventional notion of disclosure suggests that it is human agency that drives the desire to keep something secret. This is easy enough to find among spin-doctors and political entities today. What Christchurch illustrates is that there is another, perhaps even more profound, form of disclosure, that is activated by controversy or crisis. **ar**

05. Studio Christchurch's CityUps, major event for Festival of Transitional Architecture, 25 October 2014. Image courtesy Jonny Knopp
06. Agropolis Urban Farm project. Image courtesy Barnaby Bennett.

01

Design thinking, everybody's doing it

Following the much maligned overuse in the business world of the terms 'sustainability' and 'community' in the mid-noughties, 'design thinking' is catching on as a new term and framework for addressing business challenges. In many ways 'design thinking' is a logical extension of the call to innovate. Indeed, 'innovation' is the current buzzword in business literature. 'Innovate or die is the stark message for big business. Big companies that fail to innovate risk extinction. That's the stark truth,' according to BBC journalist Matthew Wall. The entry of design thinking into the parlance of business is an intriguing evolution of strategic thinking and the latest convergence with the design world.

Design thinking, as is understood in architecture, is a process-driven, iterative examination that draws forth and analyses the complexities of creating a building or site response, examining the physical, cultural, social, political and economic constraints and opportunities to deliver a response that is tailored to each site and problem. It accepts that humans are central to any problem and that one does not know the outcome at the start of the process.

With the success and growth of technology companies such as Apple or Google – which have employed a human-centric view to their products – it is timely that businesses and economies worldwide are looking towards innovation to grow their market share and competitive edge – especially since one of the hardest parts of innovation for most businesses to understand is the question of innovation itself, or, more simply, 'how to innovate'.

Intuit is a US-based software development company producing financial software packages, utilising design thinking to 'increase customers' emotional connection with the company and to increase its market share'. Intuit attempted to integrate design thinking into every aspect of the business, including trying to find 'new ways to instil design thinking', they 'even tried changing the layout of ... office spaces'. In 2006 Intuit had six designers at the executive level, today it has thirty-five.

Large organisations, such as the Bill and Melinda Gates Foundation and the Rockefeller Foundation, have embraced design thinking, with leading design schools across the world teaching design thinking. The d.school: Institute of Design at Stanford University promises 'radical collaboration' and offers a series of courses, ranging from a 90-minute 'virtual crash course in design thinking' through to a ten-week course. The courses are aimed at graduates and beginners, with: 'NO PREVIOUS DESIGN EXPERIENCE REQUIRED. We'll provide all the information you need to be successful... Through this experience we hope you will take away some of the basic principles of design thinking and start to adapt them into your personal and professional routines.' The Stanford approach is to: 'utilise creative and analytical approaches and collaboration across disciplines, drawing from the methods of engineering and design and combining them with ideas from the arts, tools from the social sciences and insights from the business world.'

The convergence of design thinking and the business world elevates the importance of process and creates new problem-solving frameworks. This presents an opportunity for architects, with architects' training placing the profession in a unique position to face the complexities of city-making. There are few other university degrees where students are versed in design processes replete with a seemingly endless set of constraints traversing the social, political, cultural, economic, financial and environmental spheres. Architects are trained to tackle complex problem-solving; and the rigours for problem-solving that design training presents are being taken up by business. Gregg Pasquarelli from SHoP Architects puts it: 'What makes architects special is that they have the ability to think across multiple disciplines.'

The Royal Institute of British Architects (RIBA) reiterates this in the results of its study 'The Future for Architects' (2009) in which it outlined opportunities for architects, not only in traditional modes of practice, but also as leaders in interdisciplinary teams. The students and graduates interviewed for the study saw the future for architects being part of multidisciplinary, networked →

01. Casa Anaya, Tijuana, Baja California, Mexico, located on a hilltop offering views of the city below. Images courtesy ZELLNERPLUS.

→ teams that did not fit what they termed the 'narrow' definition of architectural practice. Rather, they described these types of practices as 'spatial agencies'.

This approach to innovation through design thinking in businesses is relevant to architecture for several reasons: firstly, it is an opportunity for architects to engage with the world on problems beyond the distinct and defined world of the 'capital A' architect and it opens up the discussion of the role of the architect beyond this.

Architects who have moved beyond the delineation of 'capital A' architect roles talk about 'taking a seat at the table'. Peter Zellner, an architect who recently left his boutique firm Zellnerplus to become principal and studio design lead at global design consulting firm AECOM, while continuing to teach at SCI-Arc, believes the move was precipitated by 'the growing schism between academia and practice'. A delineation where there is a 'fear within academic circles of the production of things and the act of doing, as well as a general fear of working within a corporate environment'. Yet for Zellner 'capital A' architects are not addressing many of the more significant challenges of our time, in particular the creation of cities in response to global capital flows, as well as the ecological crisis.

To have a seat at the table, Zellner suggests one must understand what drives large projects, the global economic flows and investment into real estate. He believes architects should at the very least take a 'credible approach to the use of other people's money' and 'be engaged with the system that architecture operates within'. As outlined in AR138–Margins in 'The machine that makes land pay', the global money markets connect us all and in turn we are all real estate investors in some form through the superannuation system. Indeed, in an OfficeUS blog interview, Zellner argues that for architects to have agency they must enter into the process of city-making at the point where decisions are being made.

Zellner is emphatic about the need for architects to be responsible for the work that they undertake within this system and have a responsibility (to use the purest professional nomenclature) for the delivery of the product to the client on time and within budget, which in theory should result in happy customers and repeat business.

It must be said that while buildings often perform a financial function and are traded, it is the cultural capital and value of the asset that creates long-lasting value for cities and, as Zellner puts it, value and return do not have to be in opposition, as it is through an understanding of how and why assets are created, that we design 'environments that are worthy of sustained use across generations'.

The creation of value in the built environment, as well as a return, is core to our time, where property assets are traded and are often represented and understood by owners as figures on a balance sheet. By engaging with the growing desire of a broad spectrum of businesses that are utilising what is core to architectural training – the design process – can the adoption of design thinking in businesses open up opportunities through which architects as spatial and design agents can traverse and contribute beyond the traditional domain? **ar**

02. The concrete, steel and stone V-shaped residence is the first house completed by Peter Zellner.

01

02

Collaborative Commons – the Latent Potential

Our patterns of consumption are changing, shifting from ownership to use, and in the last three years the affect of this emergent condition has been widely discussed – beyond the architecture community at least. Jeremy Rifkin, an economic and social theorist, labels this emerging economic system 'collaborative commons'.

'By 2050, the collaborative commons will be the dominant economic paradigm all over the world ... the capital market will be a junior partner adding value.' It is postulated here that architecture (practice and product) is already acting latently within the developing social and economic order of collaborative commons; however, we are not making the link between the profession's work and this highly impactful system. This is both reassuring and idiotic at the same time, as it means practitioners do not understand their role and work correctly, one of the reasons architecture currently operates with diminished effect.

This is not advocacy to dissolve the role of an architect, but that we must understand the changing economic system to position our profession within it, with independence, but also responding to client demands. The economic system of collaborative commons is not simply sharing, collaboration or co-creation. It can be all or any of those actions, or none. The resounding characteristic of collaborative commons is that the cost of producing goods and services is very little and therefore profit is non-existent. It is therefore not a moral position, but an extremely sustainable and productive way of operating in a networked world.

If Rifkin's predictions prove correct, one's entire working lives will be defined by this economic transformation and to understand that the architecture profession is already acting within the system is a great economic advantage. To support the assertion that architecture is acting latently within collaborative commons, it is important to understand that the structure of collaborative commons is distributed, collaborative, promotes peer production and lateral networks, characteristics mutual to architectural practice and product generally.

Collaborative

In 'The Instrumentality of Appearances in the Pursuit of a Legible Urban Order', Patrik Schumacher (associate, Zaha Hadid Architects) argues the built environment can be a three-dimensional 'layered interface of communication' and convey both freedom and spatial order (via parametricism). Of course, he is arguing to the Zaha Hadid Architects aesthetic, nonetheless it must be recognised as to how architects deploy digital technology to convert knowledge to intelligence – to bring quality of order to a facade or morph the structural function of a roof with programmatic requirements. This process is collaborative, where singularity is not diminished but enhanced, with extraordinary client briefs and contextual information synthesised across project teams.

Distributed

Consider architecture operation (practice and product) as a tight network of administration, aided by the 'internet of things', a vast source of not simply communication but energy and logistics. This integrated network of people, machines, natural resources, production lines and logistics networks allow architectural briefs, budgets and timelines to be circulated, solved and delivered. Unitised Building is the exemplar of utilising this network to solve budget, time and safety restraints by off-site production and distribution across architecture, engineering and construction.

Alongside this type of highly functioning operation, exist grass roots urbanism, co-creation and public participation, cases that should be considered as the means to an end, but not the product, as to do so dilutes architectural skill and experience. The recent practice of using *Minecraft* in the co-designing of public space allows for the production of user-generated three-dimensional diagrams, a valuable asset when combined with the critical thinking and construction knowledge of an architect. The pace of change around makes it difficult to filter new ideas and also hold onto strong partnerships, so these tools are valuable to aid clarity around complex problems, but not valuable alone.

Communication of this hierarchy of skills, tools and product is critical for the profession to thrive and there are clues in current practice. WorldWide Storefront (WWSf), a platform created by Storefront for Art and Architecture for a range of projects, provides a 'simultaneous, multi-locus of alternative spaces around the globe and a digital platform for the expression and exchange of latent desires within contemporary art and architecture practices'. Far from circulating a singular conversation, WWSf was a distributed network broadcast from 19 September to 21 November 2014, which expressed alternative positions born from a local or regional context. 'A to B – Crossing the Railway' (Montreal, Canada), a cartographic urban project for WWSf by Vincent Lalonde-Dupuy, Pierre Horo-Lin, Xavier Coulombe-Hurray and Camille Angibaud, mapped the →

1-2. A to B – Crossing the Railway (Montreal, Canada), by Vincent Lalonde-Dupuy for WorldWide Storefront. Image courtesy Pablo Neumann.

03

04
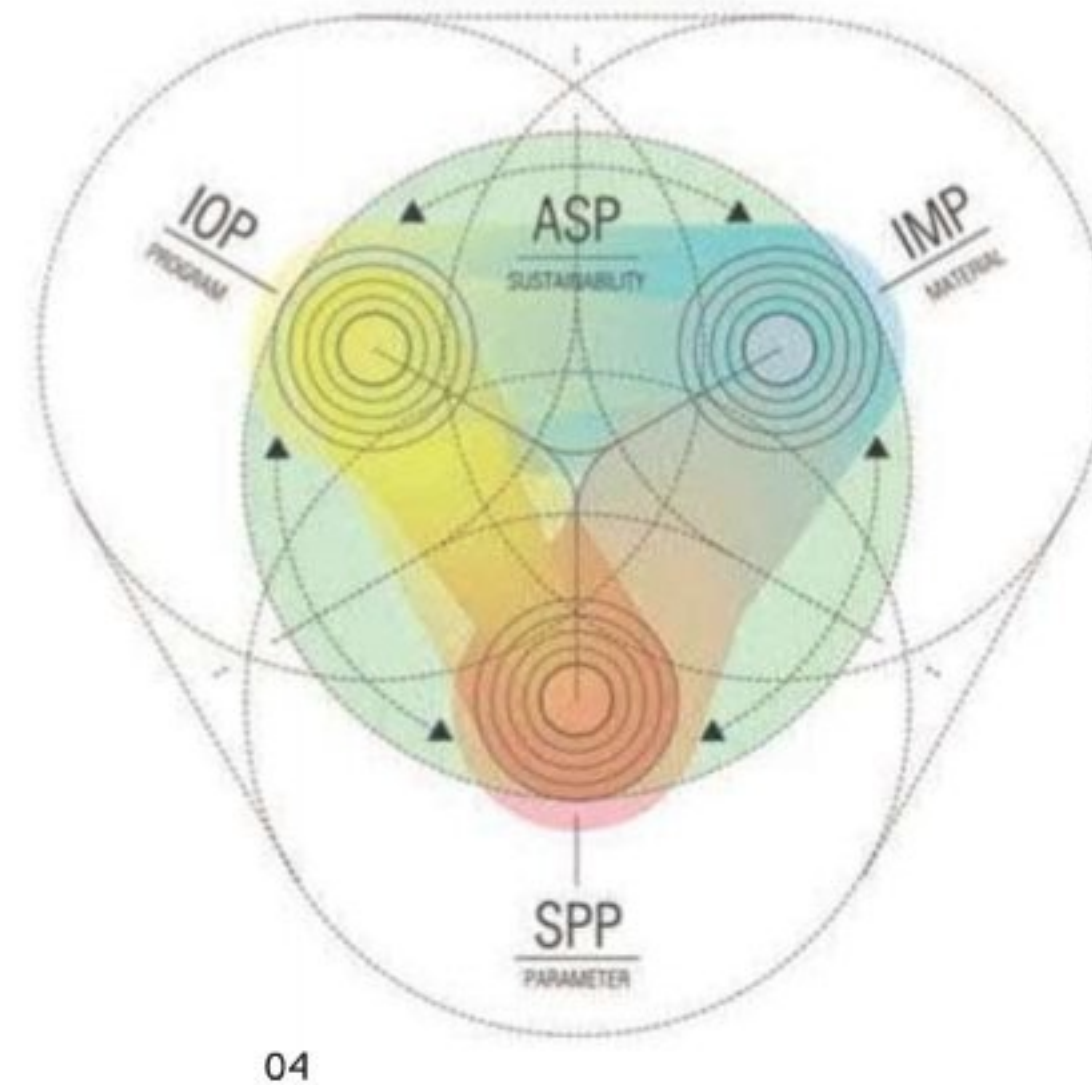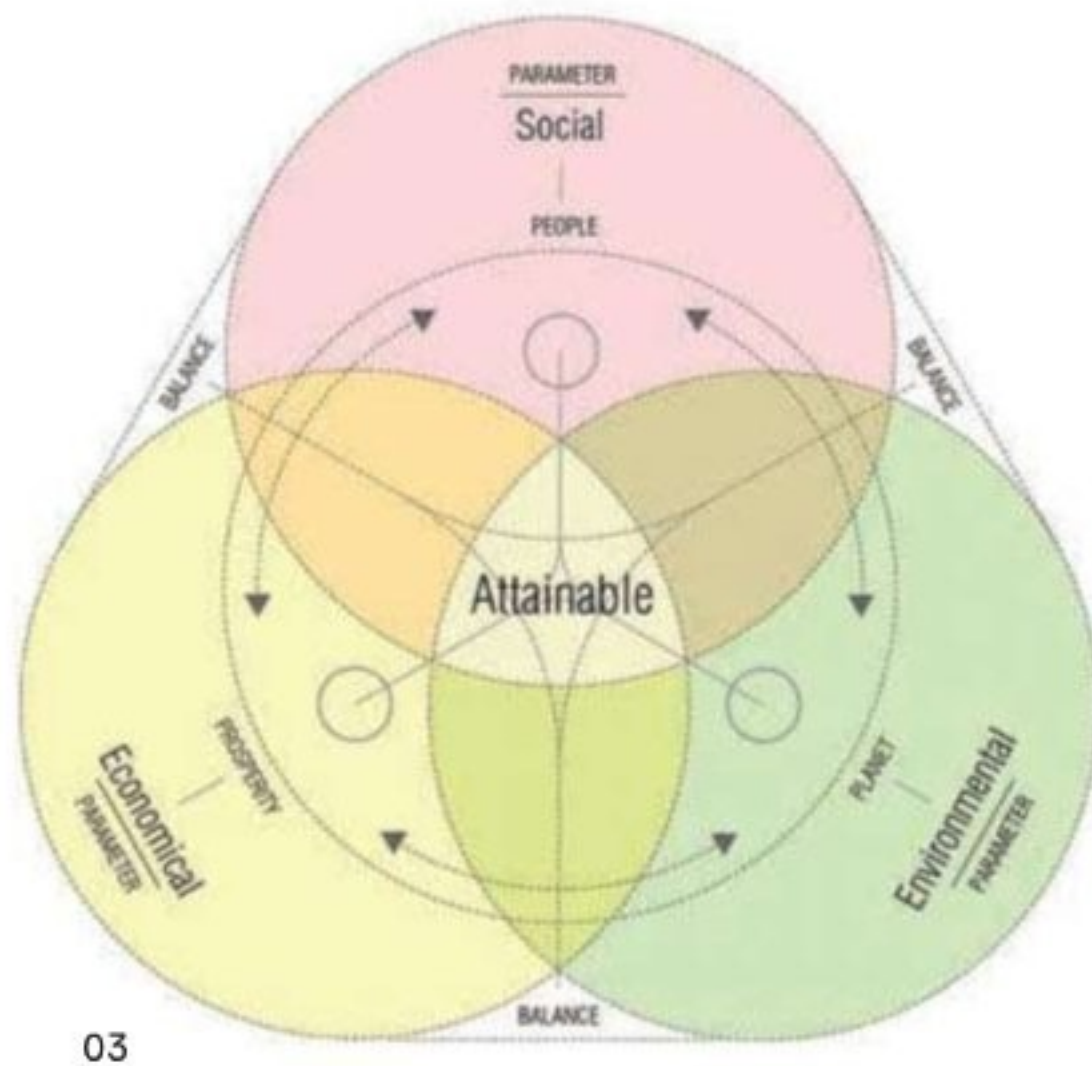
→ landscape along the Canadian Pacific Railway by monitoring legal and illegal railway crossings. Site investigations continued in other projects for WWSf – Sandra Teitge, in 'Storefront Marketplace', conducted a program of films, lectures, performative interventions and radio programs in three market environments (St Paul, Minnesota, US, Thessaloniki, Greece and Berlin, Germany). While the highly functioning operation of architecture swirls around us, a space for exchange (both physical and digital) is critical to the functionality of a distributed network.

Promoting peer production
An architect is an excellent sidestepper. From inventing circuitous solutions to planning and legislation constraints, to breaking open bureaucratic and/or construction process, the profession is well-known (among ourselves at least) for mass collaboration. Again, Unitised Building leads the way in innovating construction processes in Australia and Asia through large-scale collaboration.

Often, however, peer production is conceived exclusively through platforms of crowd-funding or crowd-sourced projects. It is important to note that collaborative commons support sharing resilient crowd-funded urban and architectural projects. Bryan Boyer is perhaps the best example of encouraging strong peer production, through Brickstarter (with Dan Hill, Sitra) and Legible Practices: Six Stories About the Craft of Stewardship (with Justin W Cook, Marco Steinberg, Helsinki Design Lab). In terms of project outcomes, +Pool is the obvious successful crowd-funding process (to date) to highlight, where a group of designers decided to attempt to solve the problem of water filtration, enabling people to swim safely in the river.

With the exception of +Pool, Alexandra Lange explains that 'a suitable funding platform for a watch is not a suitable funding platform for a city. The expectations, the timeline, the relevant community are all wildly different'. When we examine peer production in relation to architecture, it is more useful to refer to our design thinking capacity than to any impact that urban crowd-funding projects may entail. Indeed architects lead the way in design thinking – a self-organised skill that contributes to a shared outcome, the architectural project.

Developing lateral networks
Rifkin predicts that the companies that prosper in collaborative commons will be players that find value in aggregating networks and services, illustrated by precedents such as AirBnB and car share membership. It is impossible to predict what new network

model will be offered on the market tomorrow, but for architects, combining disparate skills and services across a project has been a core competency across the changing professional role for centuries.

Currently, the hyper-networked world creates an equation where social interaction increases as the density of communication increases, and this demands we continually browse, scan, reconnect and update as innovation accelerates. In terms of practice, this means a continual recalibration of our efforts, a self-reflexive pause seen in the practice of UNStudio, which has been consciously compiling knowledge since founding the practice in 1988. The introduction of its four 'knowledge platforms' in 2013 formally recognises this acquisition. Ben van Berkel says: 'The challenging climate within the profession today has in turn challenged us to take a close look and to rethink our organisational model with the ultimate aim of improving our architecture and ensuring its relevance within contemporary conditions ... in recent years we have set about the reorganisation of our studio into an open knowledge-based practice.'

Where it becomes very difficult to maintain this renewal is in the built project itself; Patrik Schumacher describes this challenge as 'the visual field must be rich in interaction opportunities and information about what lies behind the immediate field of vision' – a challenge both exciting and promising for its social consequences and unknown aesthetic outcomes.

However, just when a conclusion appears, the context shifts and recalibration becomes urgent. Pier Vittorio Aureli describes in his essay 'A Room Against Ownership' that the Mendicant order of the Franciscans understood use as the act of sharing things, a form of living together in 'common'. Aureli illustrates that use is in opposition to ownership, because use implies the temporary appropriation of an object by an individual, while ownership is where the object is appropriated for profit. These definitions remain constant; however, it is entirely plausible that when the dominant paradigm moves from capitalism to collaborative commons, from property rights and autonomy, to transparency and open-source innovation, these oppositional acts of use and ownership may not stand counter anymore and a new kind of spatial order would need to be calibrated. **ar**

3. UNStudio's Knowledge Platform organisational diagram
4. UNStudio's Architectural Sustainability Platform. Images courtesy UNStudio.

1953-1954 Hill Street House, Melbourne. Roy Grounds.
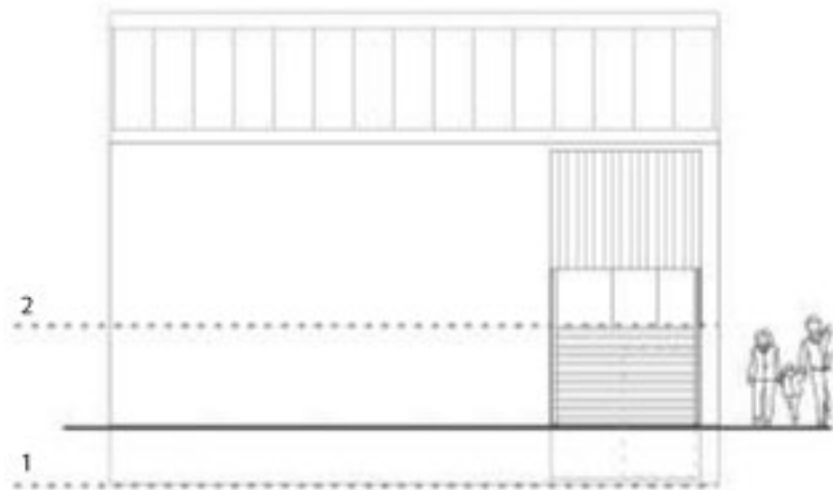
1958 Walsh Street House, Melbourne. Robin Boyd.
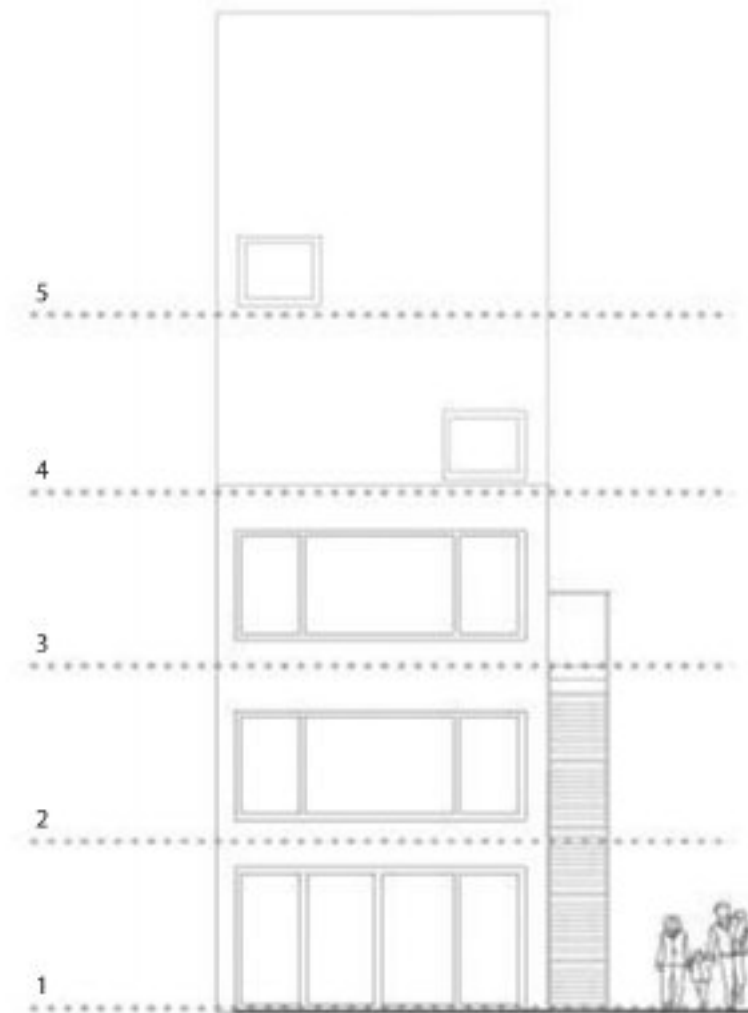
2000 Moca House, Tokyo. Atelier Bow-Wow.
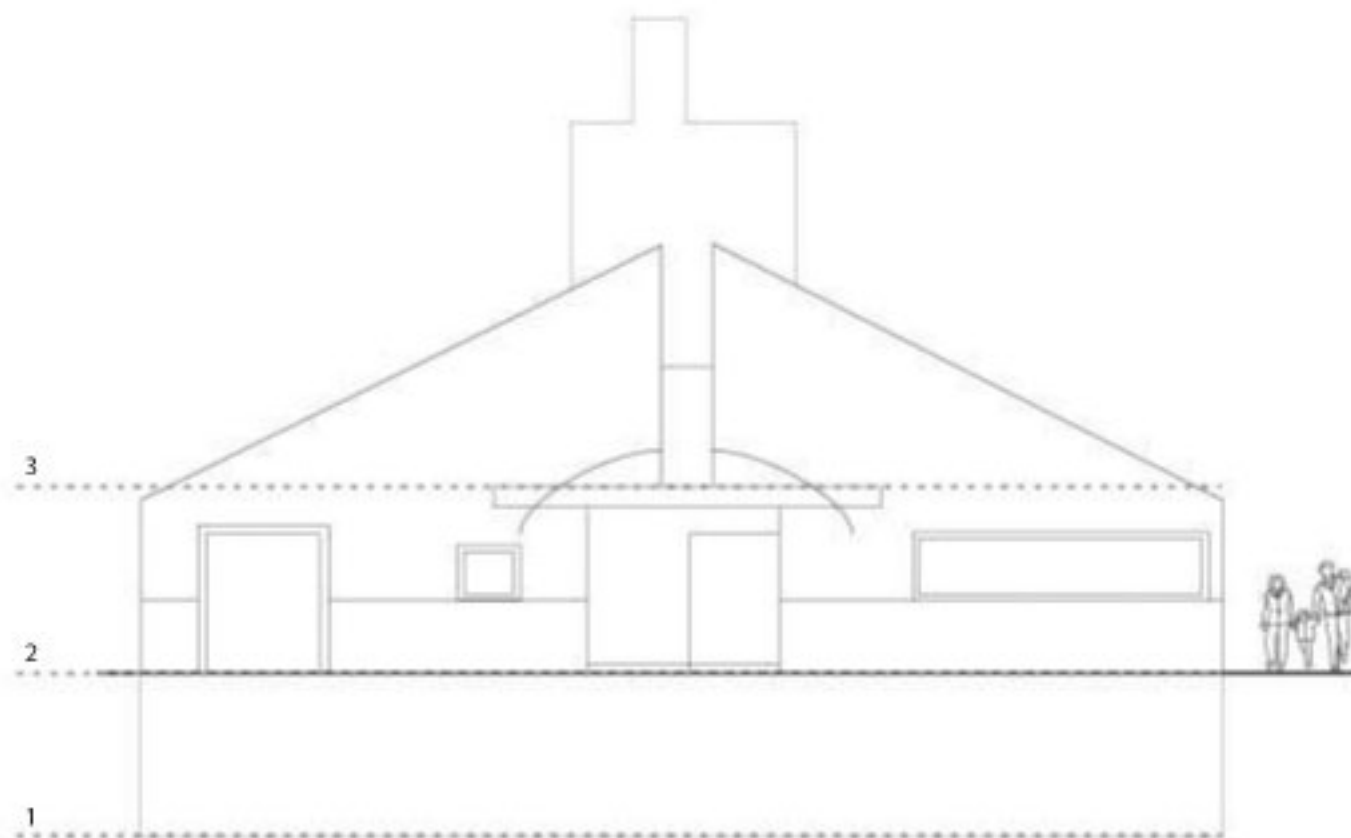
1962-1964 Vanna Venturi House, Philadelphia. Robert Venturi.
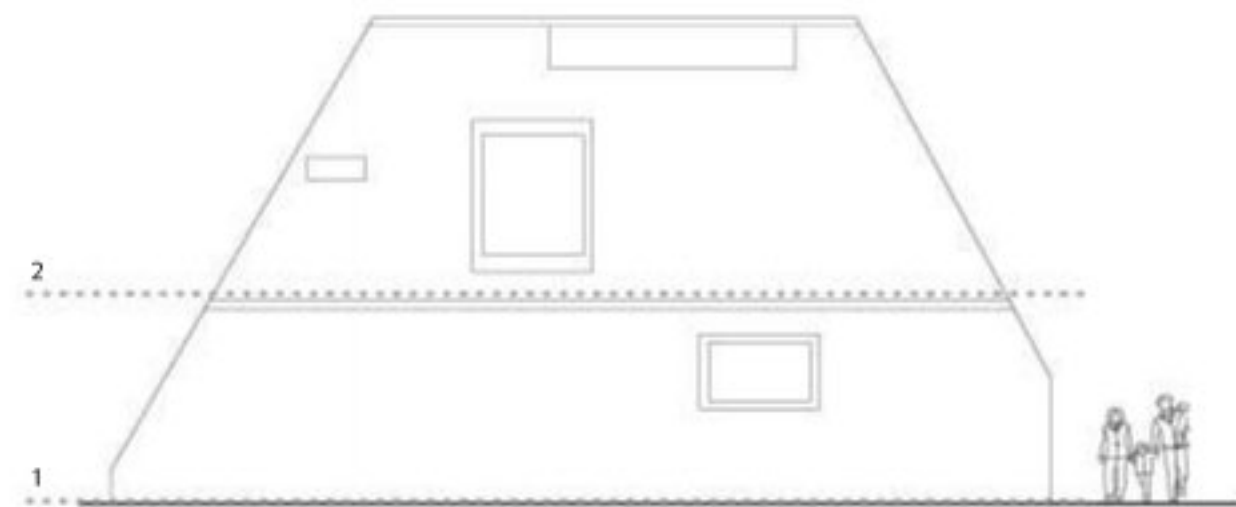
2001 House Saiko, Yamanashi Prefecture. Atelier Bow-Wow.
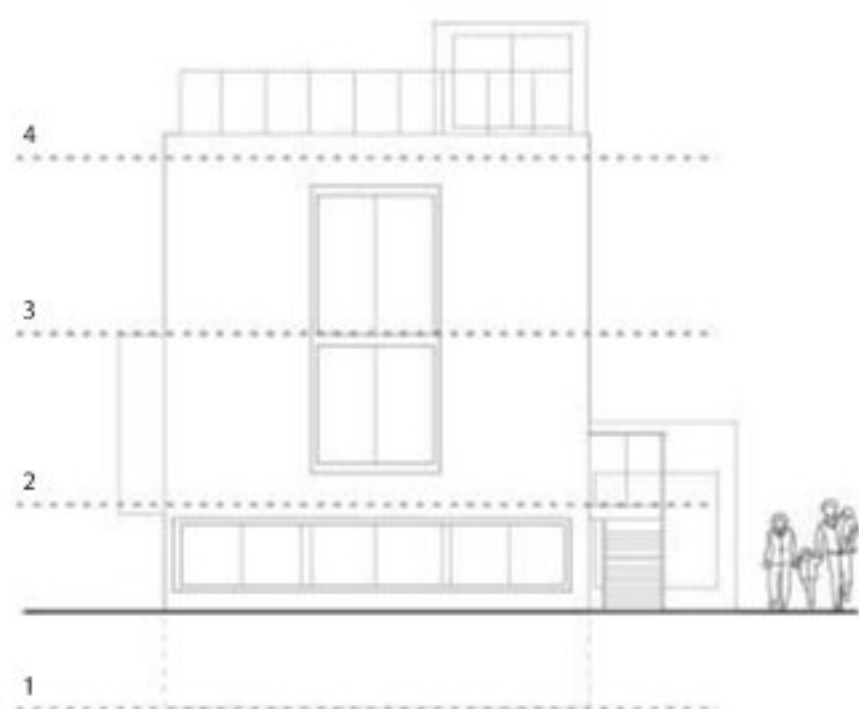
1998 Ani House, Kanagawa Prefecture. Atelier Bow-Wow.

2002 D.a.S House, Tokyo. Atelier Bow - Wow.

1999 Mini House, Tokyo. Atelier Bow-Wow.

2003 Gae House, Tokyo. Atelier Bow-Wow.

Undercover Architects: the Deceptive Face of Frontline Practice

A recent visit to a series of iconic 1950s Modernist houses in Melbourne – as part of the Robin Boyd Foundation's Open Day and Design Discussion, 'Sean Godsell's Favourite Houses', in November 2014 – revealed a very distinct common attribute: the scale and configurations of the internal spaces were considerably different, and often contradictory, to 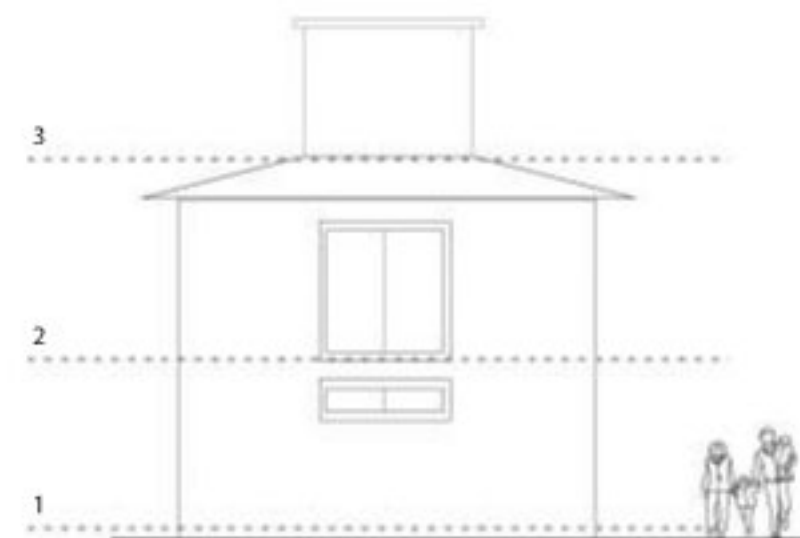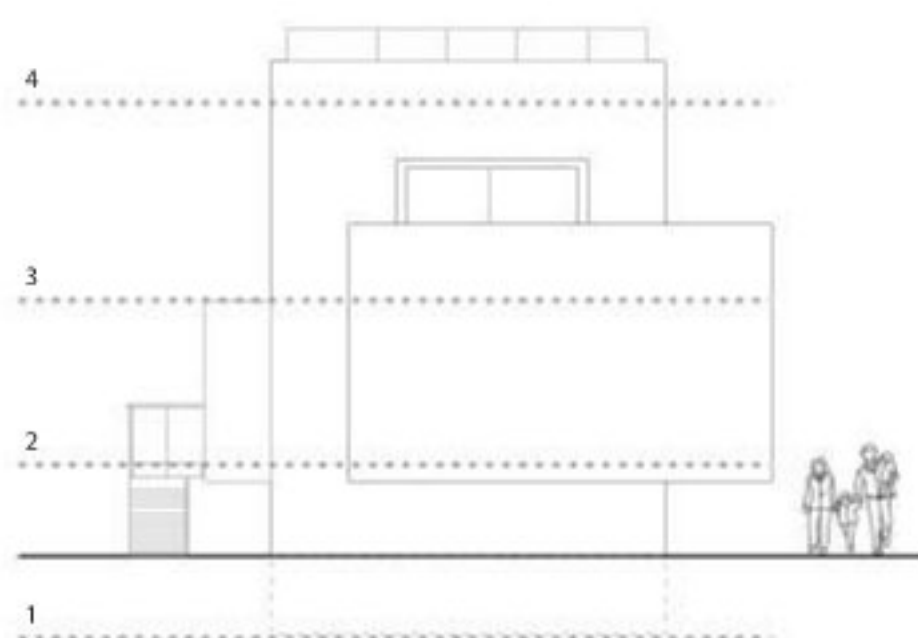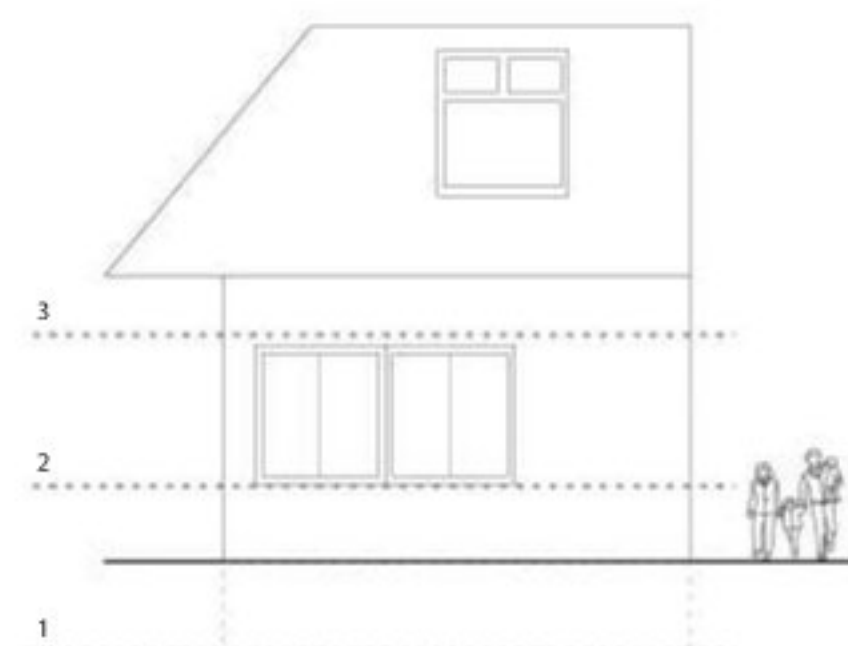the external projection. This arguably deliberate disconnect between public image and architectural intention supported the insertion of some very bold architectural propositions into one of Australia's most socially and aesthetically constrained contexts: the suburbs. Given that our current architectural scene is plagued with political and regulatory constraints, which have been blamed for a lack of architectural progression (noted in Marissa Looby's 'The New Radical Pragmatist (On Validation)' AR130 Pawn), could these issues similarly be overcome through a deliberate misrepresentation of objective? Does architecture have to disclose its intentions and what happens if an architect deliberately sets out to deceive its oppressor?

Mid-century Modernism in Australia is often fondly described as a 'golden era' – a time of creative exploration that removed the shackles of a British colonial past and allowed an architectural pursuit that better represented the country's distinct lifestyle and landscape. The first houses produced in this time were influential not only on the local residential 'scene' but also on the progression of public and commercial commissions. A key example is Roy Ground's 1953 Hill Street House in the conservative Melbourne suburb of Toorak. Acknowledged by Grounds as a small-scale test for his concurrent commission of the National Gallery of Victoria, its bold, open-plan configuration was in stark contrast to the traditional segregated plans of the colonial mansions throughout the suburb. However, this internal configuration was not clear from the street and indeed the austere symmetrical facade – despite being different in materiality and compositional detail – presented itself as analogous to its classically influenced neighbours. Pushed to the street edge and with an overextended facade, to mimic the scale of the streetscape, there was little evidence of the audacious circular courtyard within, nor the fact that this small dwelling was protecting a suite of three apartments at the rear. Here, compositional tactics were used to defend the set of small

insertions by inflating the exposed main house in line with the streetscape. In particular, the scalar relationship between facade elements and the human body were distorted: the front door enlarged and punctuated with a bold door fitting, typically reserved for stately homes, and traditional windows replaced by upper strip glazing, a device that also lifted the ceiling to increase the height of the front elevation.

Scalar distortion was adopted by another influential house from this period, Robin Boyd's Walsh Street House located in nearby South Yarra. The 1958 dwelling follows Grounds' lead by creating a double-storey, open-plan family dwelling split across two blocks either side of a square courtyard. Similarly, this bold proposition was unlike anything within its street context and, equally, the facade attempts to hide this deviation from public scrutiny. In this case, Boyd's intentions are the opposite of Grounds' – here instead misrepresenting the double-storey configuration as a somewhat enigmatic single-level dwelling. Similar tactics are used: again a traditional window is replaced with a ribbon window, lifting the roof from the wall, and the door is exaggerated and punctuated with a grand handle ensemble. To disguise the second storey, particularly as both floors are accessed from the front facade, the ground floor entry and window are tucked beneath a wide stairwell, obscured by an entry canopy, that leads up into the main entrance. In both cases, the Modernist abstraction of common domestic features – door, windows and roof – assists in the game of deception through an ambiguous representation of common elements. Together these two deceptive houses signalled a shift, subtle in delivery but brazen in critique, that ultimately led the profession towards a new era of architectural enquiry.

A decade later the same scalar approach reappears in a less abstract form to herald the arrival of the Postmodernist movement. Again the residential work of this period was important in the testing of concepts that would emerge in the larger commissions of the same architects. A leading example from this period was Robert Venturi and Denise Scott Brown's 1962–1964 Vanna Venturi House, in the historic suburb of Chestnut Hill in Philadelphia, concurrent to their 1963 Guild House. Here the image of emblematic domestic facade elements was deployed to create a caricature facade to mask a bold interior configuration. Again, similar to Boyd, this →
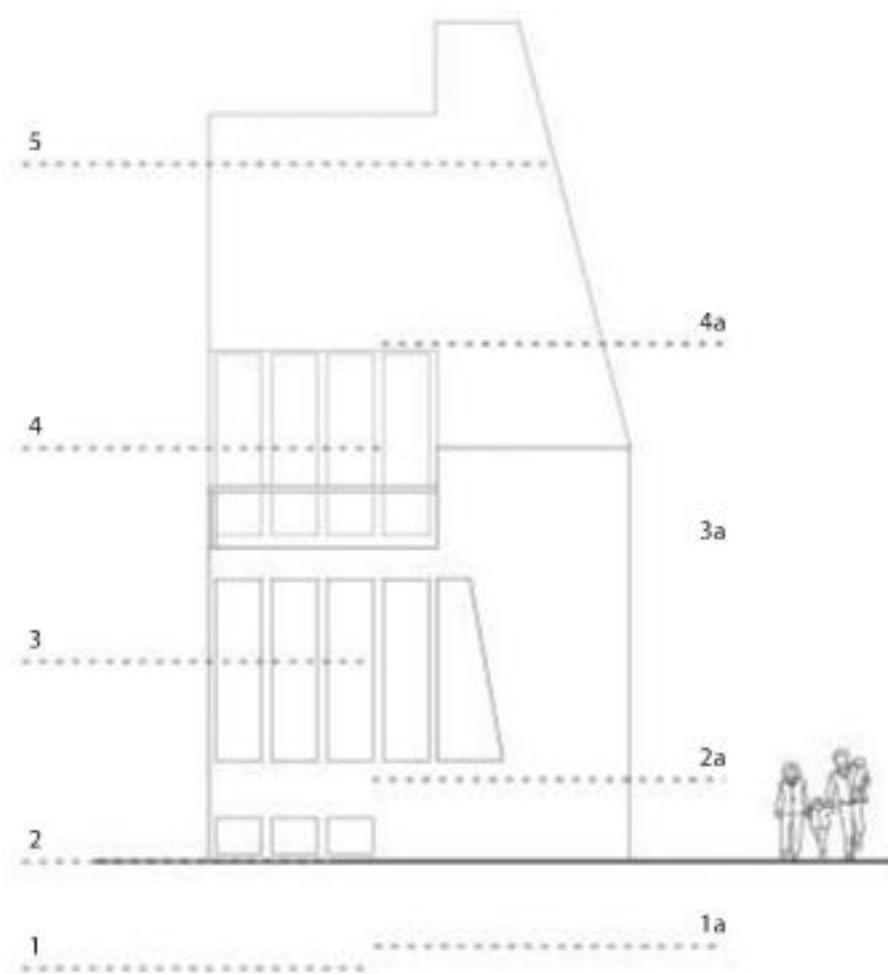
2005 House and Atelier Bow-Wow, Tokyo. Atelier Bow-Wow.
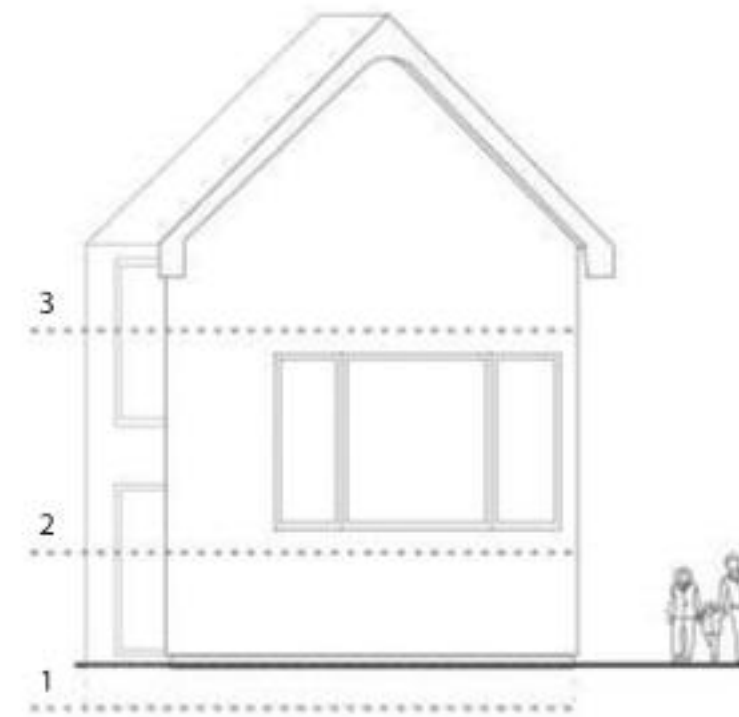
2008 Tread Machiya, Tokyo. Atelier Bow-Wow.
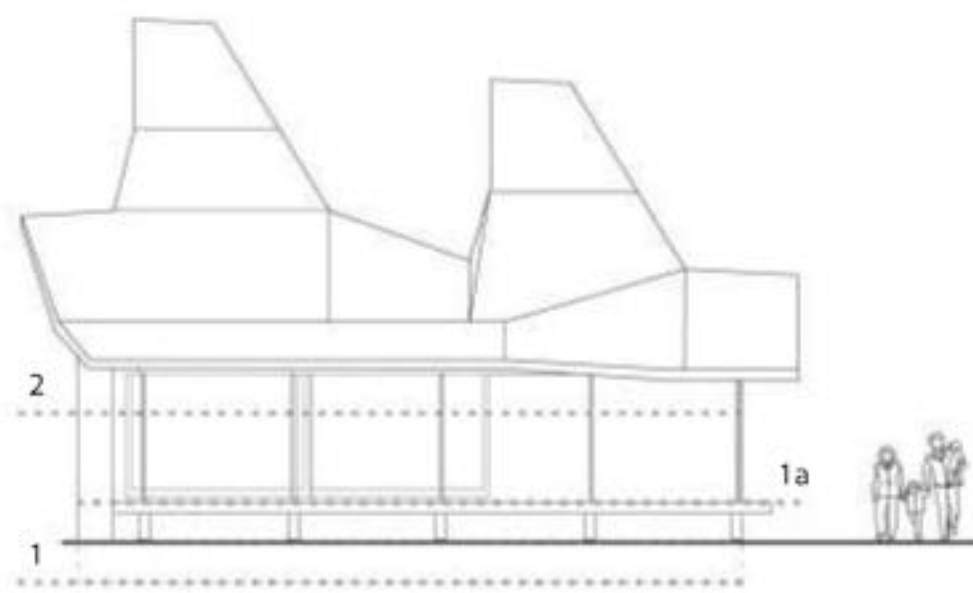
2006 Nora House, Senndai. Atelier Bow-Wow.
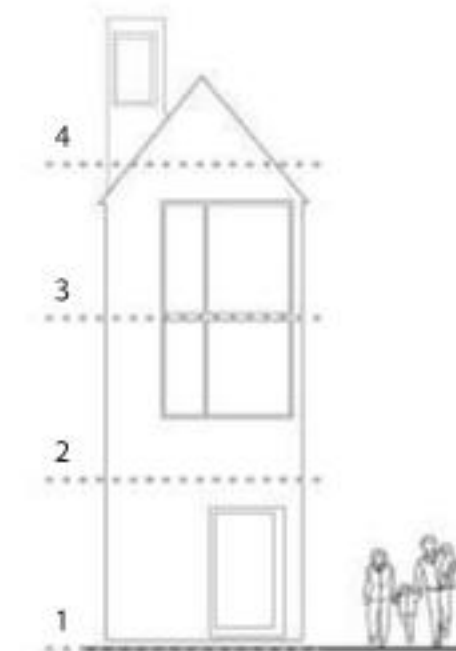
2010 Split Machiya, Tokyo. Atelier Bow-Wow.

→ manipulation obscures quite a large building, in this case a substantial three-storey dwelling that exploits the contextually acceptable pitched roof form to project a contradictory image of a monumental, yet simultaneously unassuming, single-storey suburban abode.

This bold act of deception continues through to the contemporary work of Japanese architects, Atelier Bow-Wow. Similar to the Vanna Venturi House, Yoshiharu Tsukamoto and Momoyo Kaijima have designed a range of private residential commissions that deliberately present themselves as single-storey dwellings, whether there are two, three, four or even five floors concealed behind. This particular approach has been repeatedly adopted by Atelier Bow-Wow over the past two decades and in reflecting on this lineage it is clear to see a significant shift from distinctly abstracted early projects, such as Ani House and Mini House in the late 1990s, to increasingly iconic domestic forms in its most recent work, Split Machiya (2010). Akin to the previous examples, this work deliberately distorts familiar images, and accepted expectations, of contemporary architecture. Consequently, such projects mark the introduction of a new era of domestic and, subsequently, civic and commercial architectural exploration within an otherwise stagnant environment. Kaijima confirms this intent, noting that post-World War II many Japanese architects pursued architectural expression via small domestic commissions – noting small buildings have the ability to act as a device for observing society from the outside and enabling 'a critical perspective on society and social relations' (*Atelier Bow-Wow: A Primer*, Stalder

[Ed], 2013). Further, she notes that important Japanese cultural typologies all display qualities of smallness. Therefore, Atelier Bow Wow's small buildings, which increasingly resemble iconic representations of domesticity, could be seen as a Trojan Horse: civic-minded insertions that attack the core spatial configurations that shape society's innermost relations, deliberately moulded to mimic, and subsequently undermine, the typology that they are critiquing.

At a time when Australian residential footprints are expanding while household sizes and affordability are decreasing, with architectural expression in major public commissions increasingly dictated by external constraints, it is time for the profession to launch its own covert attacks. The once innovative forms of the Australian Modernists have now been adopted by oppressors and used to propagate ideologies that restrict the sustainability of the built environment, the ability to pursue architectural expression and, consequently, the credibility of the profession. As these projects demonstrate, critically occupying set expectations enables the opportunity to escape from constraints to establish a new direction for architecture, creatively responding to the issues of contemporary society. **ar**
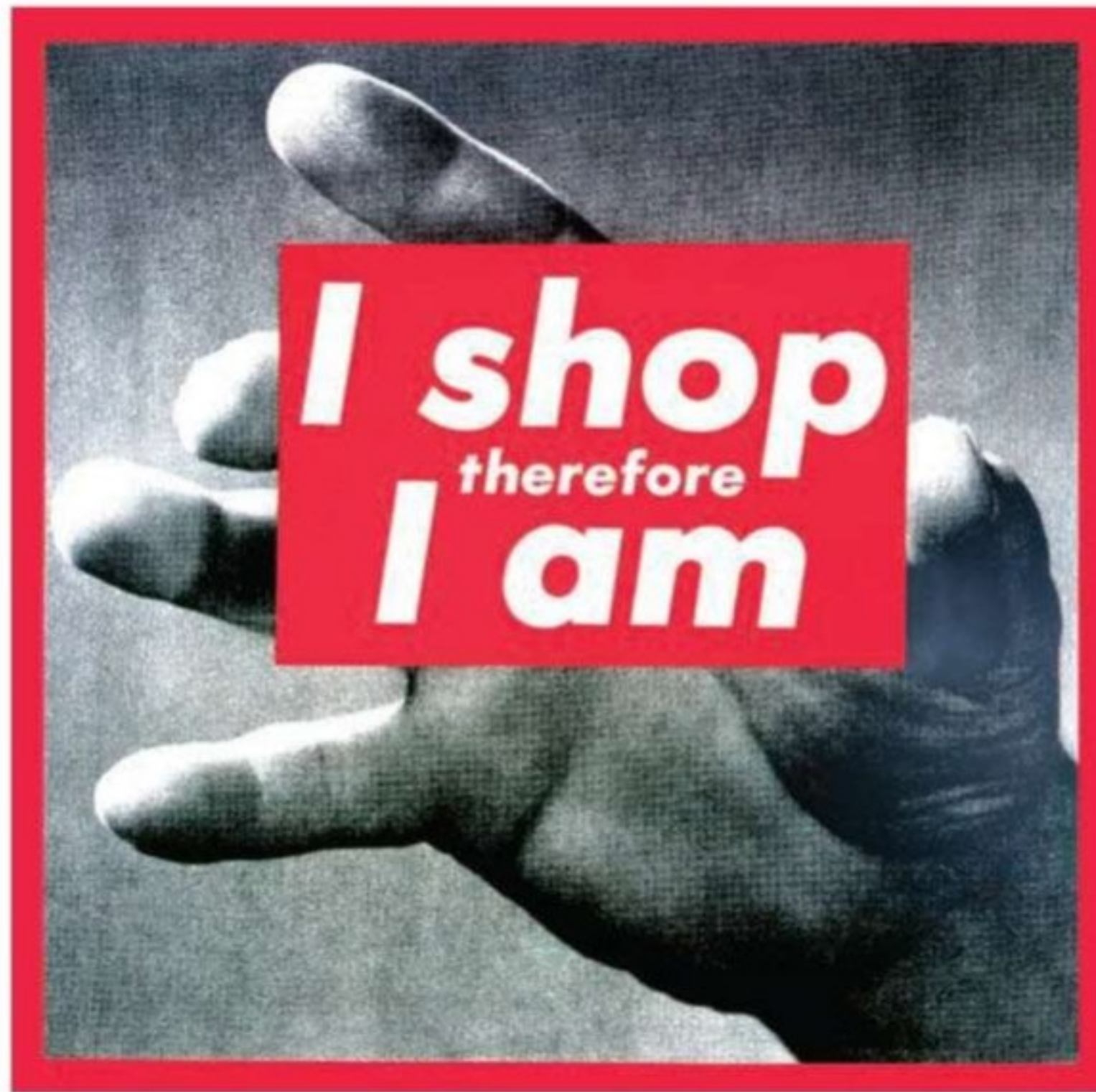
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I am data therefore I am

In 1987, in Futura bold italic type, US artist Barbara Kruger reduced an entire generation into a single idiom: 'I shop therefore I am.' This succinct cultural critique reflected on how urban consumer lifestyles were shaped by Capitalist objectives. Today, perhaps, the reductive message for the current generation is better expressed as 'I am data therefore I am'. The shift from marketing and coveting material goods, to the stockpiling of vast amounts of intangible and potentially perishable information, has seen data assume an unprecedented social and economic value. Not only has personal data emerged as a pseudo-currency for the online world, it has also acquired a significant exchange value, to be traded and exploited in the real world. This commercialisation of information has produced an urban information economy and a twenty-first century data-centric urban lifestyle.

Information and communications technologies promise to transform cities towards more livable, democratic, efficient and sustainable municipalities. Nevertheless, augmenting the city with electronic sensors via a network of urban citizens, or passive data-providers, has inadvertently kindled uncertainties surrounding surveillance and the potential exploitation of user-generated data. To be sure, there are many benefits to be gained from the development of smart cities and the provision of digital urban services. The smart city proposition lays the foundation for a new mode of urban governance in which the operation of civic infrastructure is optimised by the network effects of urban informatics and social media. But this emerging model of municipal governance is fraught with Orwellian visions of urban control rooms operated as digital Panopticons – Jeremy Bentham designed the Panopticon in the late eighteenth century as a form of architectural surveillance, where the minimum number of power figures could watch over the greatest number of inhabitants. It is now more important than ever to consider the compromises, or value exchange, individuals make when 'opting in' or electing to contribute digitally to the governance of collective urban life.

Espionage tactics have historically relied upon urban sites and architectural structures to enable surveillance. In these instances, architectural form was designed as a surveillance apparatus to project an image of authority, collect data and enforce control over those within. By controlling space, designers could control people, but in an age of electronic espionage enabled by ubiquitous information and communications technologies, what is the contemporary role of architectural space? And what is the future of architectural practice operating parallel to a model of urban governance enabled by electronic automation and digital surveillance?

The series of architectural models (five models included right) explores the security of personal information within a data-centric city. In his book *The Mode of Information: Post structuralism and Social Context*, Mark Poster describes the operation of this emergent urbanism as 'a system of surveillance without walls, windows, towers, or guards'. Essentially, espionage without architecture.

It would be naive to assume that a single building could function as a vault, protecting personal information while retaining social connectivity for those within (this is the flaw of the Faraday Cage as a building typology). Like Barbara Kruger's subversive text-based statements, these architectural models are content with assuming the tropes of protest in order to challenge the philosophical foundations of the centralised and technocratic urban vision for smart cities. Using clandestine tactics of infiltration, these architectural models – hypothetical objects of counter-espionage – are devised to circumvent and subvert digital systems of surveillance, allowing architecture to resume its role as an authoritative instrument of espionage. By reintroducing an architectural narrative into the world of digital intelligence gathering, the material realities of electronic space may be disclosed. It is understood that our physical architectural reality is mediated by digital technology, but what role do spatial forms and architectonic objects play in the operation of digital espionage?

02

03

04

05

06

The paradox of a physical architecture operating in an era of digital urban governance is explored through the design and fabrication of six physical models (pictured), each predicated on the belief that contemporary espionage has not yet entered a post-architectural era. Speculative prototypes range from constructions designed to generate and emit vast quantities of redundant data in order to complicate data analysis conducted by large corporations, to the truly confrontational: structures designed to paralyse digital transmissions.

This mode of architectural practice is critical of the democratic promise of 'open data' and wary of the potential for private companies administering smart city technologies to emerge as undue beneficiaries. After all, 'the medium for control space is not so much space as it is information'. In 1996, Mark Poster stated that 'database anxiety has not as yet developed into an issue of national prominence'. However, in 2014, attention given by news media to the paradox of maintaining individual privacy in a political context where the collection of data is justified on the grounds of national security and urban development is as omnipresent as digital surveillance itself.

Our inability to define the spatial boundaries of online data storage and venture into its interior renders cloud computing as separate from the city. And yet, the shadow cast by the cloud affects all aspects of everyday life. Yes, the digital world is reshaping its real counterpart, but the physical realm remains instrumental in determining the types of data collected and stored online. Rather than removing the necessity for physical presence, the digital world has only reinforced the critical role of real face-to-face connections and material structures.

This concept is highlighted in an exhibition at London's Victoria and Albert Museum – *Disobedient Objects*. While smaller in scale, the objects presented – contemporaries of the disruptive architectural models shown – are powerful examples of how movements for social change drive innovation in design.

Featured among the ninety-nine objects of protest is a DIY open-source drone and a graffiti-writing robot programmed to paint slogans on road surfaces while driving. The most operative of these were designed to seamlessly interface with digital media. Inflatable cobblestones intended to be batted between police and protesters, for example, exploited social media's insatiable appetite for sensational and reproducible images, generating an artefact described somewhat paradoxically as a 'hand-made tweet'. Similarly, by augmenting conventional buildings with strategies for subversive urban engagement, these disruptive architectural models aim to explore the physicality of digital urban culture.

Such architectural instruments are the contemporary artefacts of espionage – architectural form has superseded the spyglass, the mirror and the notebook. Situated between the scientific and the tectonic, each structure challenges digital exchanges to become a part of the hierarchy of physical space. Consequently, the models are a spatial investigation into the relationship between the physical and the virtual, intent on uncovering an emerging spatial dynamic. By hybridising the rigidity of the architectural fortification with the dexterity of the digital, the models encourage critical designers to consider the responsiveness of architecture when confronted with digital tactics of espionage within urban technocracies. **ar**

01. Barbara Kruger's *(Untitled) I Shop Therefore I Am*, 1987. Kruger having reformatted René Descartes' statement, 'I Think, Therefore I Am'.
02. Architecture to generate redundant data
03. Architecture to encrypt private space
04. Architecture to broadcast appropriated intelligence
05. Architecture to grant physical asylum to digital informers
06. Architecture to paralyse digital transmissions.
All imagery courtesy Lucy Warnock.

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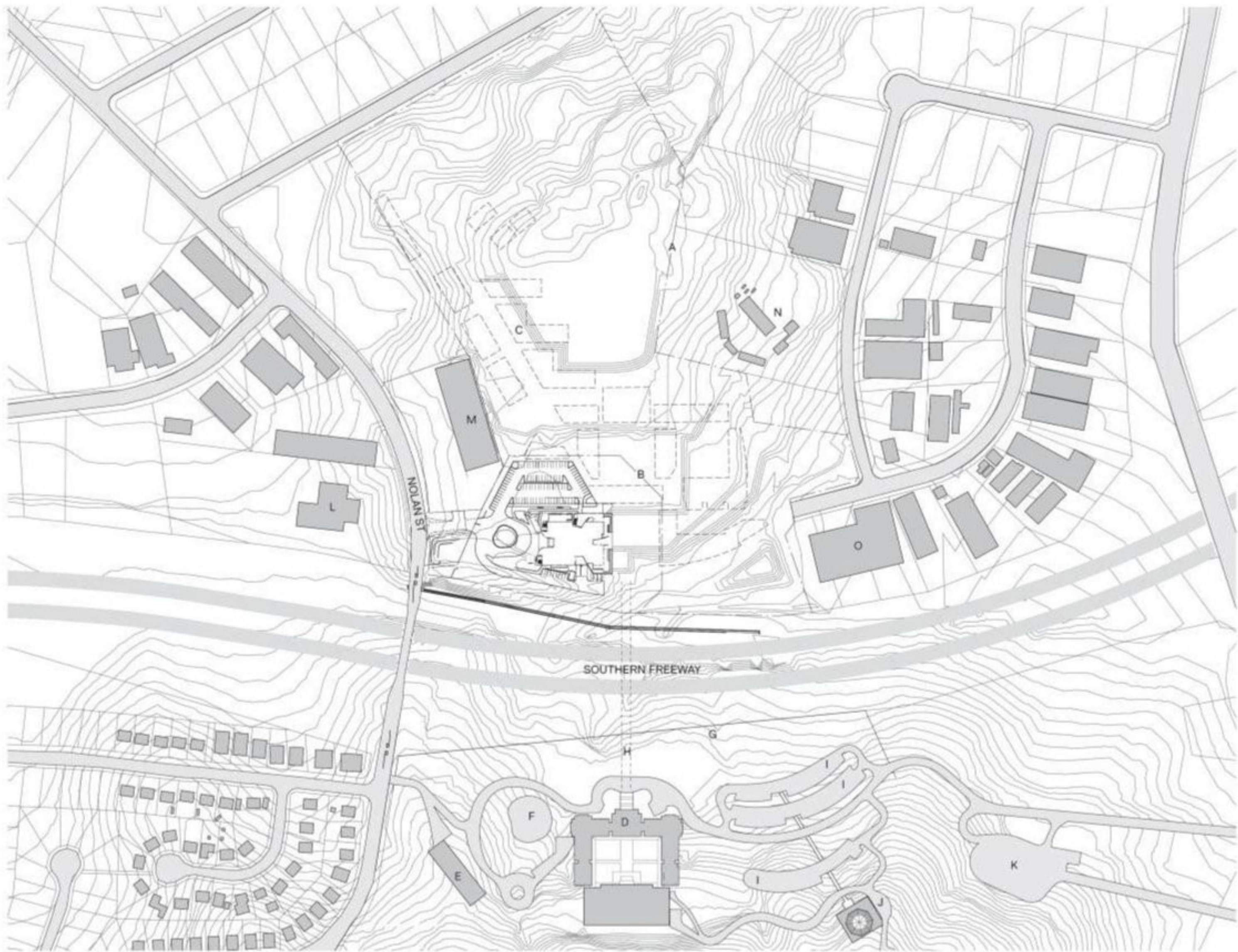
ar139

NAN TIEN INSTITUTE AND CULTURAL CENTRE

01

Location: Wollongong, Australia
Architect: Woods Bagot
Review: Genevieve Murray
Photography: Peter Bennetts

Site Plan

University campus buildings are de rigueur capital developments in the now globalised Australian tertiary market. Frank Gehry's UTS Business School Hassel's Global Change Institute at the University of Queensland and Johnson Pilton Walker's University of Sydney Faculty of Law are a few recent and notable mentions. Designed to springboard university marketing campaigns, enable the inclusion of progressive pedagogy, engender a social and collegiate atmosphere, these often landmark buildings allow architecture practices to flex some adventurous design muscle on interesting and well-sized projects, while, with not exhaustive budgets, the constraints are certainly less restrictive than other institutional briefs.

Woods Bagot's Nan Tien Institute and Cultural Centre, designed for the ambitious Taiwanese Fo Guang Shan Buddhist order, is the first building in what is proposed to be an extensive new university campus for Wollongong. The project is the keystone and stage one of a landmark development, with the original masterplan, designed by Conybeare Morrison International,

envisaged to include student accommodation and a more extensive campus complex. The project is proposed as a setting for community interaction, education and cultural exchange, with initial provision for 300 students expanding to an expected 3000 for undergraduate and postgraduate educational programs in humanities, economic and business studies, social sciences, religious studies and Asian studies. →

Siteplan (above)
A Site boundary
B Stage 1 boundary
C Future masterplan buildings
D Nan Tien Temple (existing)
E Nian Tien dormitory (existing)
F Lily pond
G Wall
H Future bridge connection
I Parking
J Pagoda
K Wollongong Memorial Gardens

L RTA Unanderra
M Warehouse
N Wollongong Detention Centre
O TNT Express warehouse

01. Nan Tien Institute and Cultural Centre is adjacent to the temple, with its terracotta colour a referent
02. The building is unobtrusive to the landscape, providing a sensitive and visually pleasing moment.
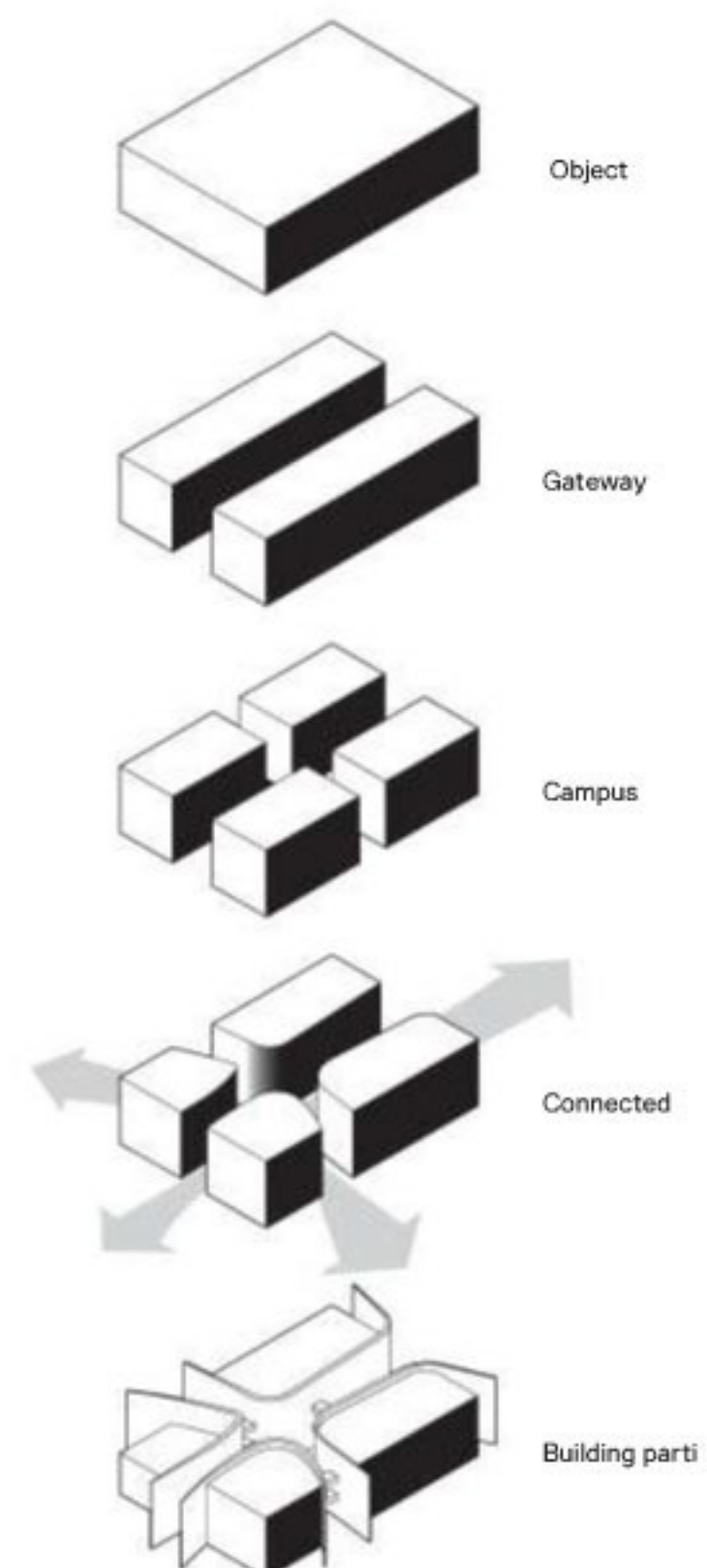
01

02

→ The project's starting point was the difficult to negotiate context of the sprawling edge of industrial land and was fortunately framed by escarpments, complemented by (and referential to) the impressive adjacent Nan Tien Temple. However, an estimated AUD$20 million was required for site remediation before construction even began, with vents now placed across the site to release potentially dangerous gasses. Somewhat poetically, a once-disused waste dump was bought for just AUD$1 from Wollongong City Council and has since become a simmering spectacle of subtle light, orchestrated views and swooping circulation thresholds that weave in and around the grand central atrium – all rising up and out of city waste. Given the site's past and the religious spirituality of the building, the lotus flower was used as a symbol for the project both in plan formation and metaphorical association to the building's function.

The building is composed of four sculptured blade walls, each housing the services, storage, thresholds and thermal mass of the building, which comprise 169 unique precast concrete panels weighing 14 tonnes each. The selection of precast panels over in-situ concrete walls was a result of value engineering that could have rendered this impressive feature of the building mute,

but with careful staggering of the forms and a textured, off-form look, no loss in textural quality has been lost. The surface allows for an expansive, well-lit atrium surface, as the blade walls extend to the building's full three-storey height. They are used as programmatic devices, concealing and revealing aspects where required. On each level, informal learning spaces are tucked into the inner curve of the walls – marked out by colour-coded carpet tiles, with lockers embedded into the thickened wall – with plenty of space for soft furnishings. Lecture rooms and offices are sectioned off and directed away from the atrium space. Framed views are cut into the louvred facade, connecting the interior to the temple and to various natural surrounding landmarks.

Externally, the fenestration is shaped to mirror the informal, playful and organic forms of the building patterns; while internally, the sky is revealed in slithers that run in conjunction with the form of the blade walls. The contrast of the curvilinear ceiling against the skylight is most striking. Windows and connecting bridges are punched through the blade walls, articulated by the contrast in the natural form of the puncture and the perforated black rectilinear bridge. This move maintains the integrity of the central →

03. The opening ceremony was attended by a number of notable figures and offered an opportunity for celebration
**04.** Large interior volumes allow for congregation and interaction.

Plans (right)
A Tutorial
B Office
c Student service
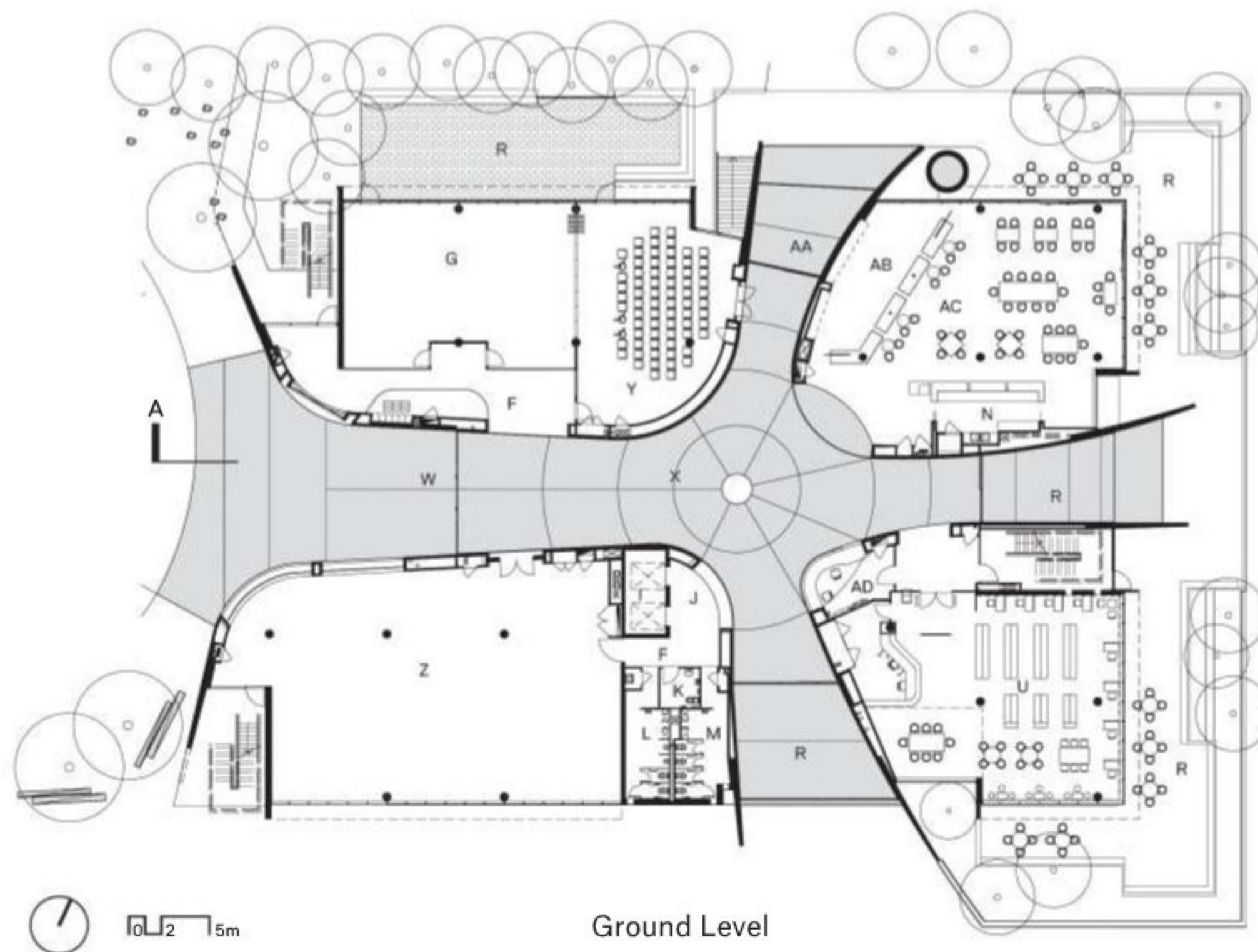D Informal learning
E Bridge
F Corridor
G Class
H Void
I Lift

J Lift lobby
K Access toilet
L Male toilet
M Female toilet
N Servery
o Meeting room
P Workstations
Q Comms
R Terrace
s Student shop
T Cafeteria
U Library
V Meditation
W Main entry
X Foyer / Gallery
Y Lecture theatre
Z Gallery
AA North entry
AB Shop
AC Cafe / shop
AD Reception
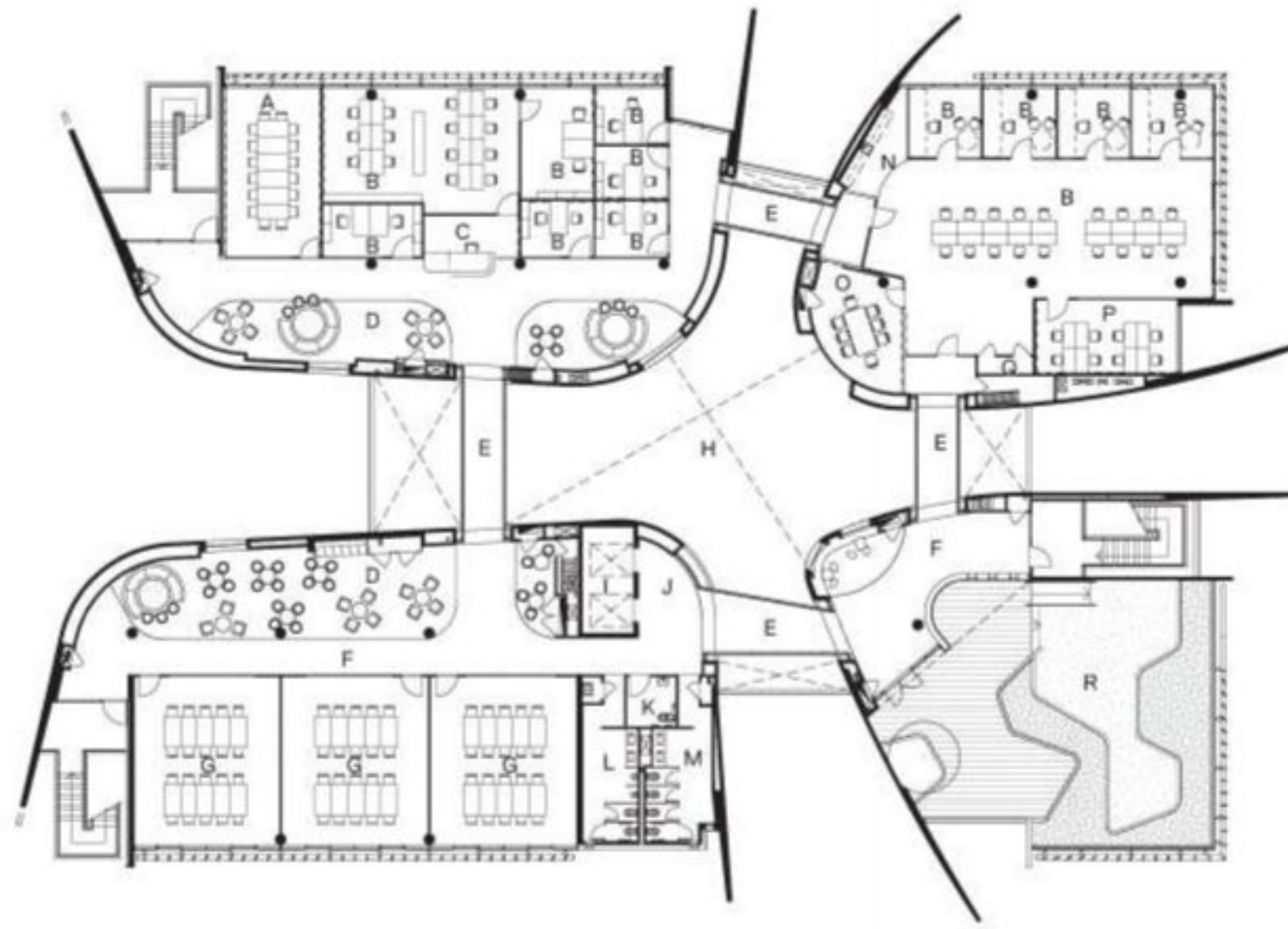
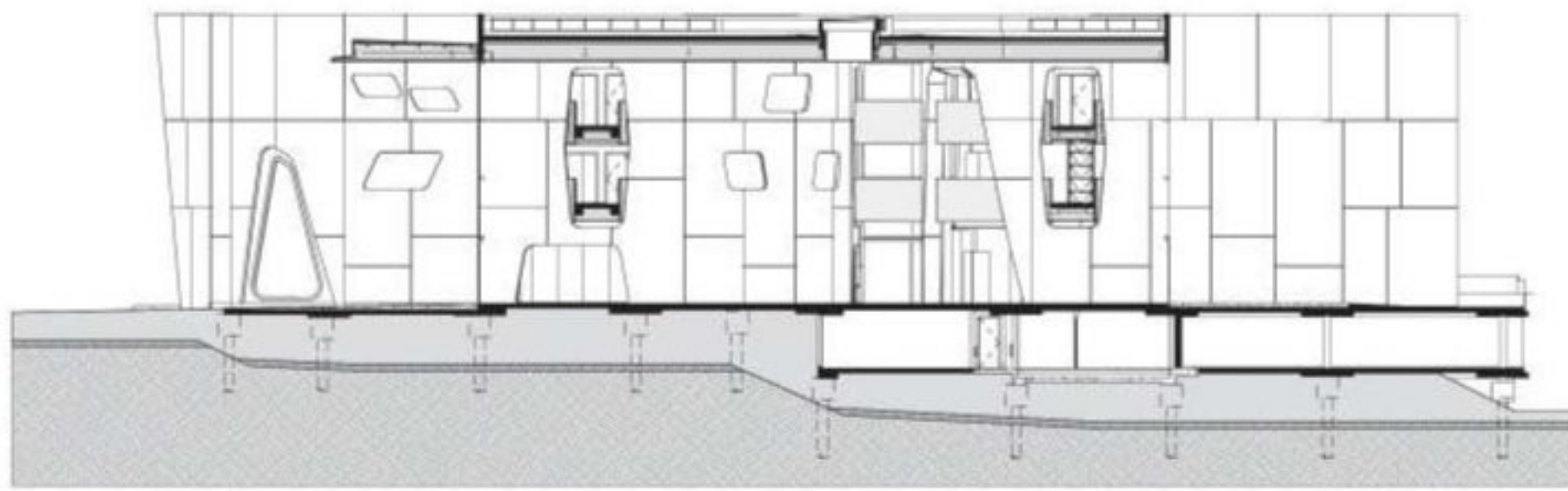Level Two
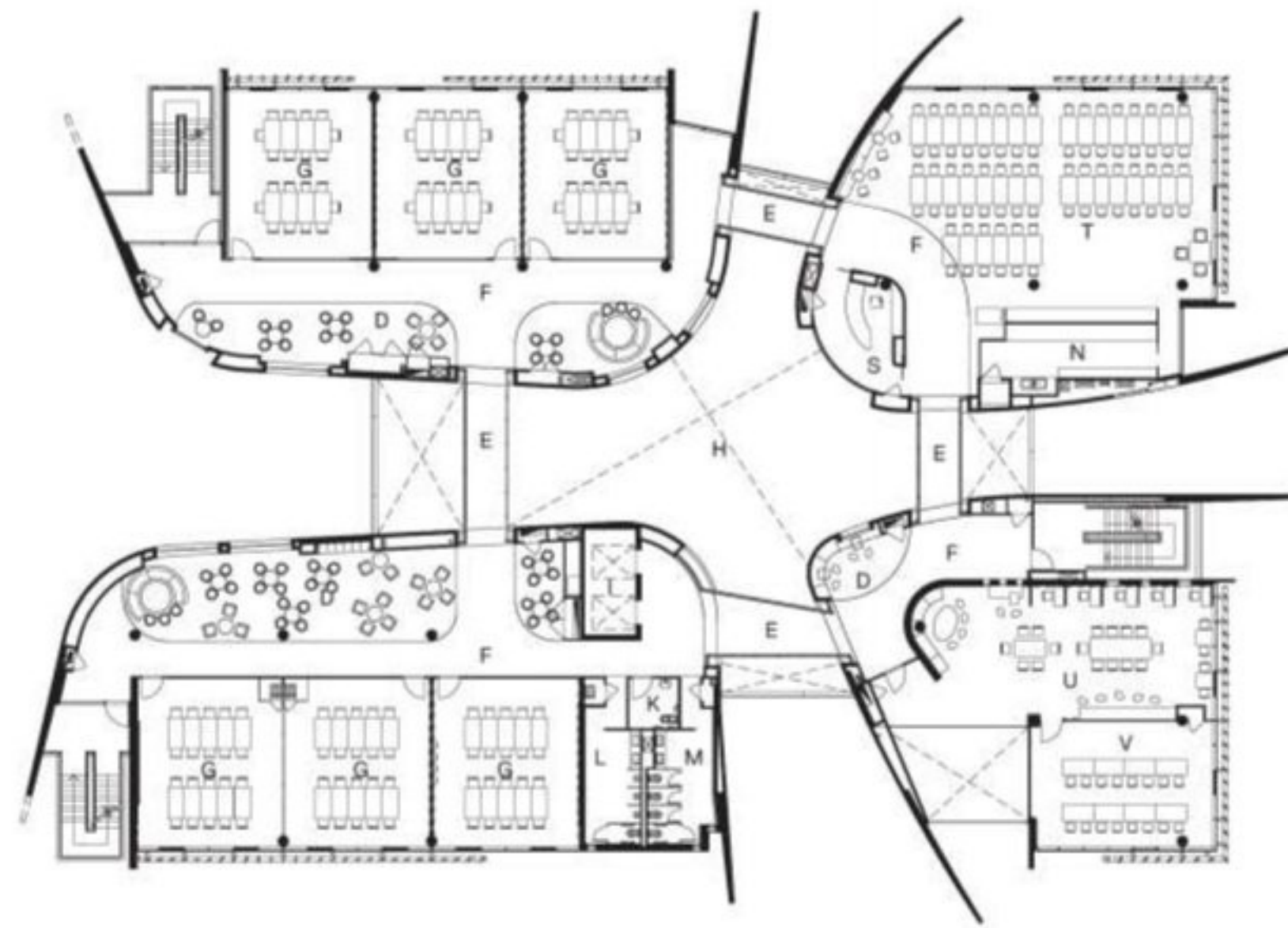
Level One

Ground Level

Section A

→ atrium and has a grand impact on circulation through the building.

There is a monastic ambiance engendered by the siting and structure of the plan. A focus on procession and circulation is seemingly as much about the social and collegiate atmosphere as it is to provide ceremonial and processional space for large gatherings. Sitting atop a rise, with deep, textured, scooped white concrete walls and sculptured punctures, Le Corbusier's Ronchamp Chapel comes to mind.

The library, academic administration, cafe and gallery are sectioned into 'pods', separated by the curving blade walls and large atrium space. View lines determine the outlook and orientation of the scooped openings, connecting internal spaces to the local references of Mount Kembla, Mount Keira and the Nan Tien Temple to the west. Until construction of a proposed grand plaza and bridge, visual connections have been paramount in establishing a relationship to the temple complex.

The exterior material palette is referential to the temple's terracotta roof tiling. The windswept 'terracotta look' louvres, scripted in Grasshopper, are patterned as a conscious departure from the controlled randomness of screened facade design. The louvres themselves are supported on a black powder-coated steel frame that, at times, dominates the facade from the interior. The placement of the louvres on the west and east facades were required to meet the basic environmental performance, but offer more to the exterior than interior spaces. However, the louvres

were a successful experiment in material technology – a five percent coating of terracotta, powder-coated aluminium designed to replicate the natural look of terracotta. While they were instituted as a cost saving in the short-term construction and maintenance, the eventual marginal saving the change afforded does not justify the departure from the low-embodied energy and exceptional light quality afforded by natural terracotta – but this was a client decision, not one made by the architects.

The Nan Tien Institute and Cultural Centre is a unique and ambitious project in what is already a significant investment in the cultural and institutional landscape of Wollongong. If the extensive masterplan for the site is realised with the same perseverance and integrity, the project will bring lasting and positive economic and social benefit to the region. **ar**
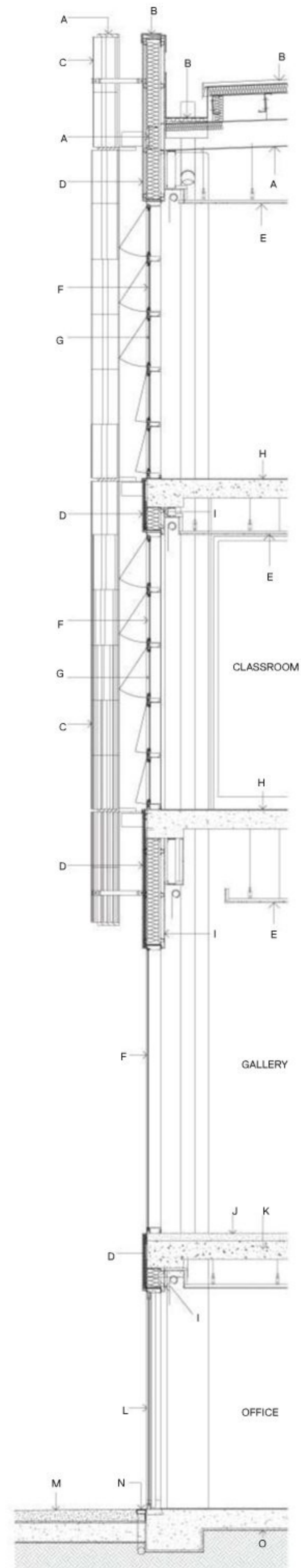
Stripwall section (right)
A Structural steel – general
B Metal roof sheeting
C 'Terracotta' screen
D Aluminium composite panel
E Plasterboard ceiling
F Aluminium framed single glazing
G Horitontal metal window frame
H Carpet tile
I Plasterboard lining
J Concrete topping slab - polished
K In-situ concrete slab - general
L Aluminium framed

glazed slider
M In situ concrete slab - exterior
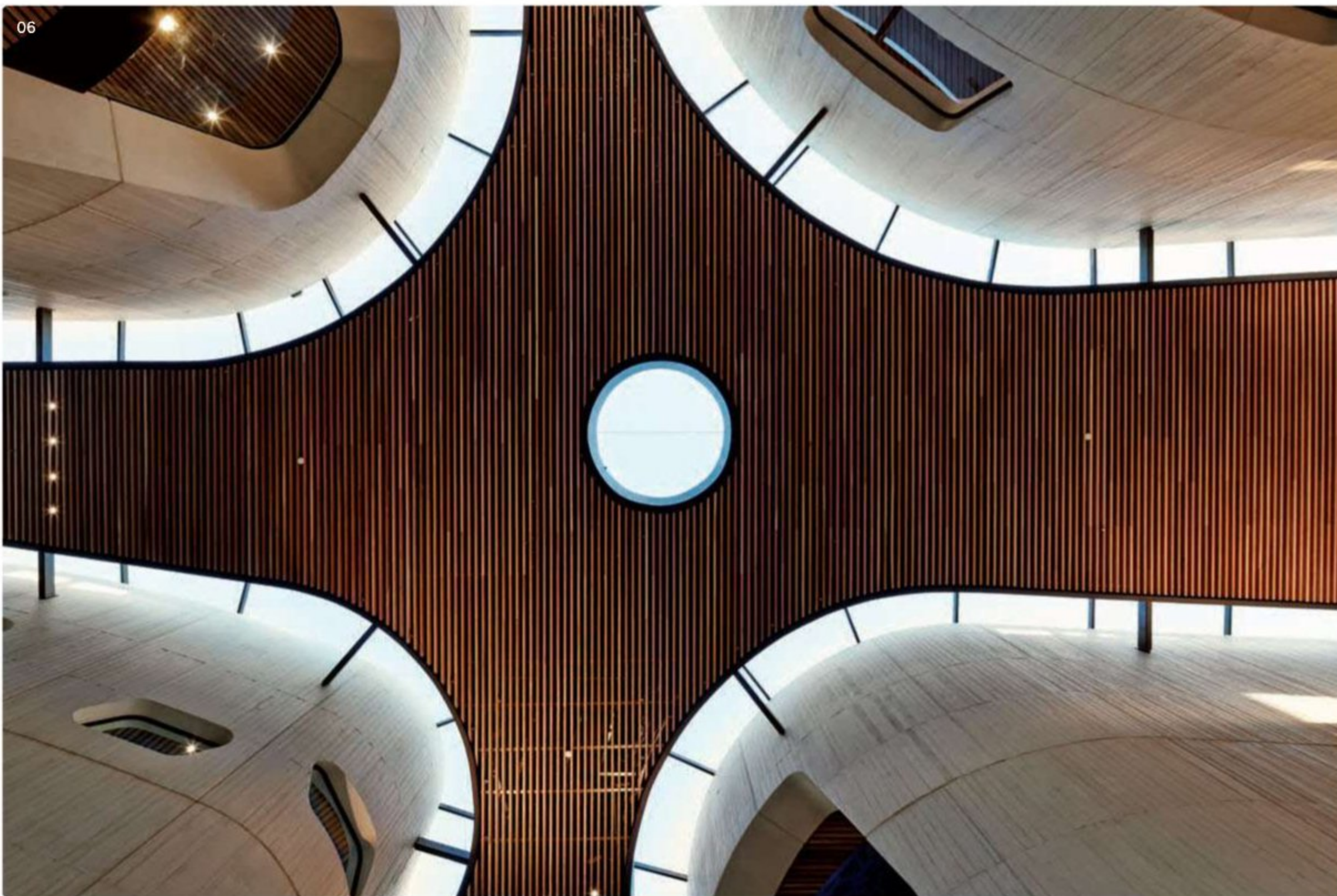N Stainless steel strip drain
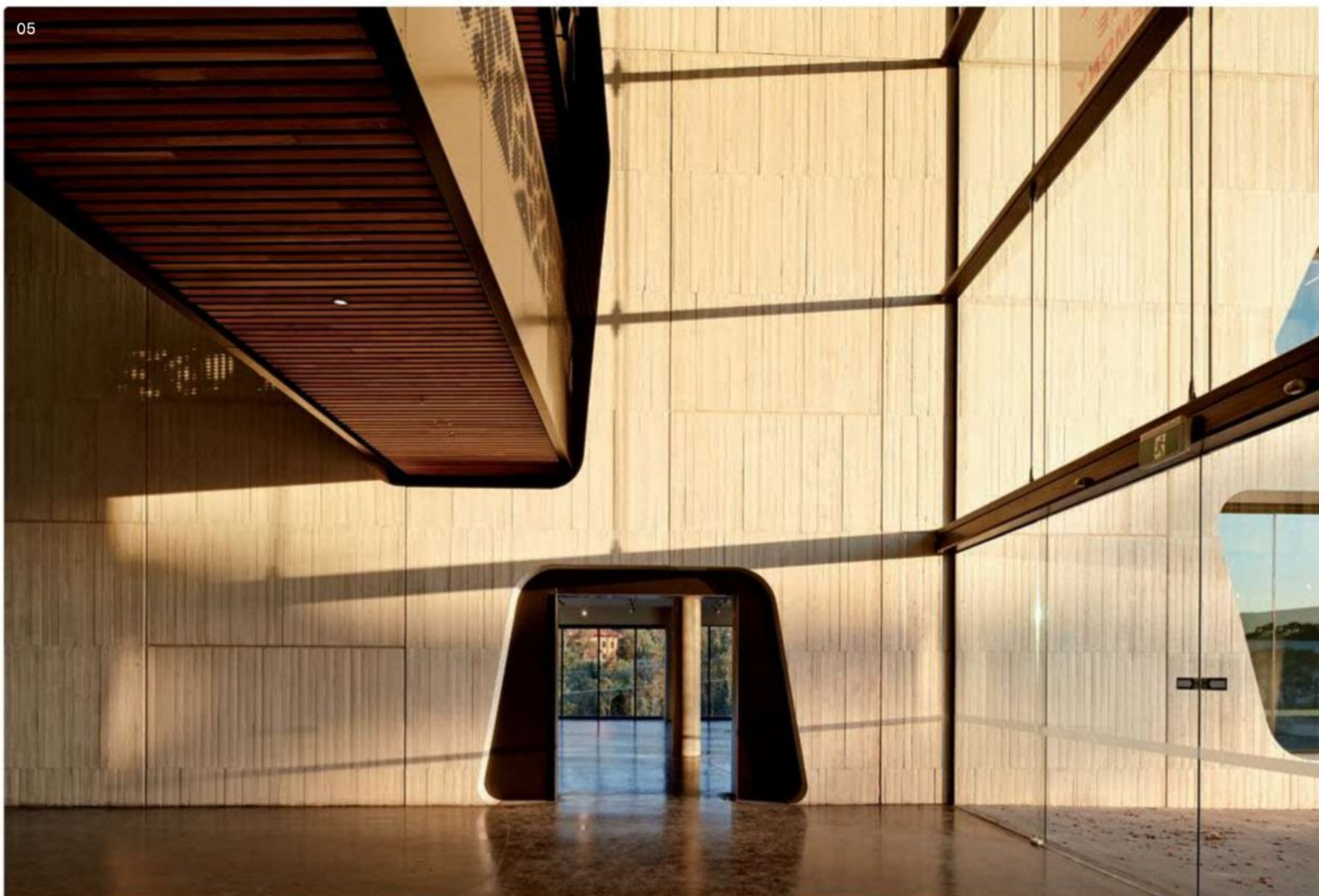O WPM/gas membrane

04. Intersecting circulation paths on level one dissect the concrete panel interior at the entry
05. The ceiling plane is an abstract arrangement that is both evocative and beautiful.
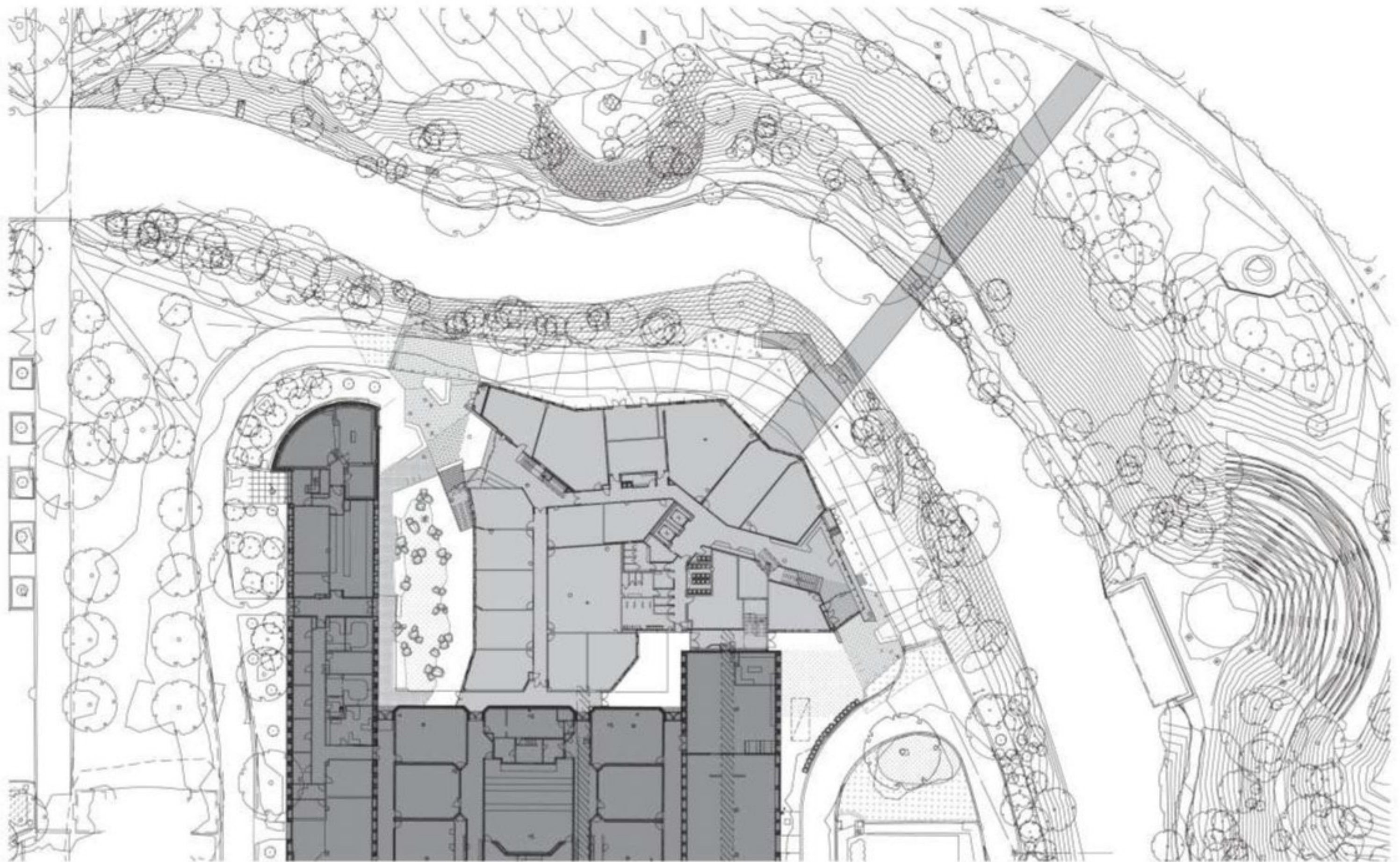
Strip Wall Section

05

06

SYLVIA WALTON BUILDING

02

Location: Melbourne, Australia
Architect: Lyons Architecture
Review: Tobias Horrocks
Photography: Dianna Snape

Site Plan

0 4 10m

'The revolution in architecture brought us freedom but robbed us of taste,' wrote Roy Simpson of Yuncken Freeman Architects. So what would Simpson think of the addition to his building by Lyons Architecture? Simpson was the architect of the La Trobe University masterplan and of the primary buildings on the Bundoora campus in Victoria in the late 1960s. He died shortly after receiving the Royal Australian Institute of Architects Gold Medal in 1997, but not before penning his opinion on contemporary architecture. Simpson believed 'that most buildings are required to play a background role in order that the occasional special one can exert its proper emphasis in the group composition'; the special one being a new opera house or an old cathedral. Lyons' teaching facility makes the most of its freedom – from the constraints of rectilinearity and consistency. It is loose with the idea of 'order'. While the Lyons facade does not outright reject its immediate neighbour's precedent, it morphs the existing geometry of windows in vertical stripes and makes them zig-zag – the effect is spiralling and dynamic rather than balanced and static. Brick is abandoned for precast concrete, brown is replaced by coloured aluminium inserts, seeking their visual complement in the bark of surrounding gum trees rather than buildings.

Yuncken Freeman established an extremely cohesive context for the Sylvia Walton Building – an ordered and symmetrical array of east–west oriented blocks, all at the same level, in sober and understated brick. Lyons' initial figure-ground diagrams tell a story of maintaining the width of the existing 1960s buildings (a model with good natural light and ventilation, as well as great flexibility and adaptability in planning) but instead of conforming to the orthogonal grid of the masterplan, they coil the linear block on itself, in a form that sits snugly against the curve of Simpson's moat. In the end, Lyons fills the centre of the coil with a lift and service core and the new building has a deep plan, more like a city office tower, where the offices are located on the perimeter for light, than Yuncken Freeman's narrow blocks.

Of course the building is first encountered from the facade, but as Lyons principal James Wilson explains, 'it's more about the interior'. The internal circulation is a sequence that winds slowly upwards around the core, a continuous pathway punctuated by destination nodes, with views to the outside, which encourages walking. The lift and service core is partially lined in mirror, spatially obliterating its presence and reflecting the leafy views outside. →
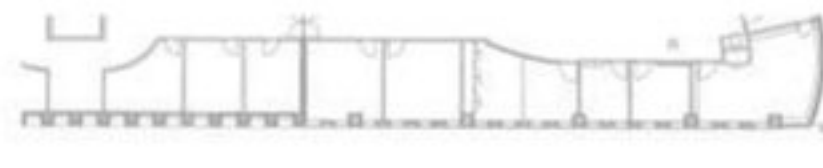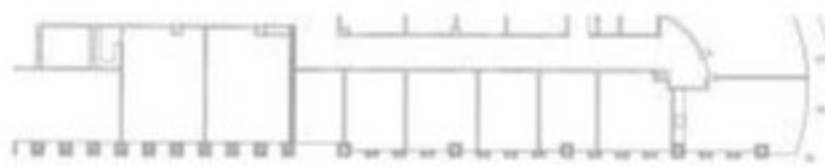
01. The north entry point invites users in with its angular entrance canopy.

02

Level One

Level Two

Level Three

03

Level Four   Level Five

$\rightarrow$ There is a small engineering miracle involved in making this seamless journey up five levels to the library. Normally, fire regulations would demand isolating doors that interrupt the flow, but generous concrete ceilings mean that smoke can gather at a safe height overhead in an emergency.

Each public/student space that springs off the circulation path has an asymmetrical, zig-zagging double-height ceiling profile. At times, simple design moves create complex reverberations: for example the ceiling of the ground floor entry lobby continues across the level two corridor and, seen out of context, appears as randomly jagged timber lining. What makes sense from the interior clashes with the exterior and vice versa. The high-ceilinged public spaces punch through the precast concrete facade to meet the exterior as fully glazed, black-bordered 'holes' in the pattern. The morphed 1960s fenestration system on the exterior meets the interior as jumpy and chaotic $\rightarrow$

02–03. Informal social spaces offer opportunities for interaction, as well as casual learning.

Section   0   4   10m
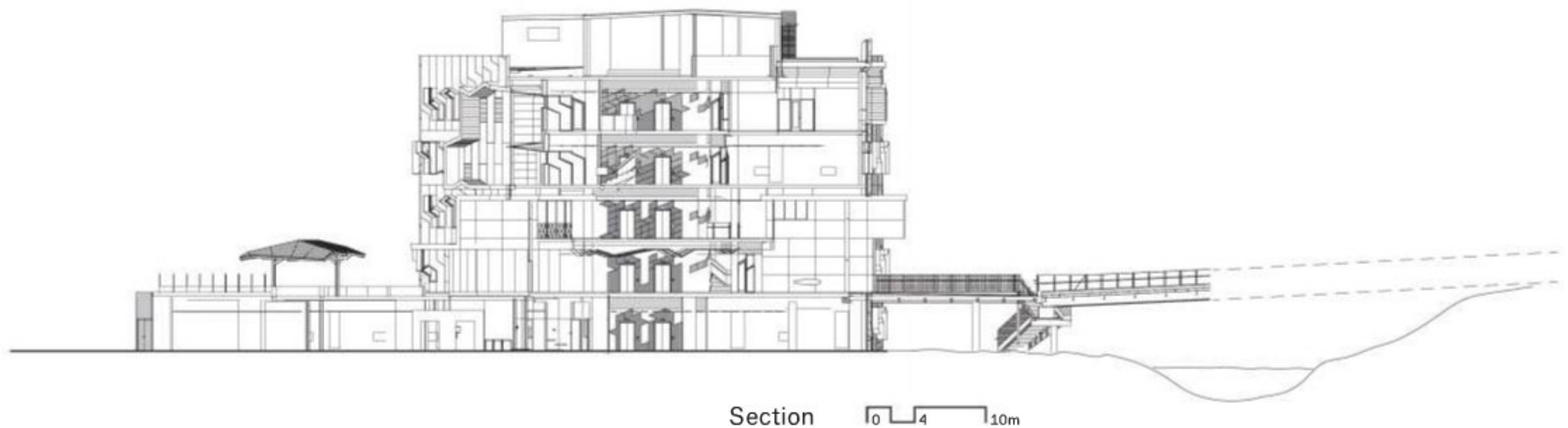
→ windows that contrast with flat floors, ceilings and work surfaces.

The Sylvia Walton Building is an education facility for local and international students seeking to gain the academic standards that will allow them entry into undergraduate courses at La Trobe University. Known as the 'Pathways' program, it was formerly off-campus. The new building has no cafe or retail functions, ensuring the students use the main facilities with all the undergraduate students in the university. The building itself goes out of its way to connect to the rest of the campus – in this, Lyons share Simpson's view of the primacy of 'precincts over buildings' in architectural design. Lyons successfully proposed a new footbridge over the moat, above and beyond the brief, which merges with the level two pedestrian circulation of the campus, extending northward to become an outdoor courtyard teaching space and connecting to new campus areas to the south. Extensive decking and seating elements further blur the boundaries between the Sylvia Walton site and its surroundings.

Drawing on its own previous research Lyons has injected cutting edge teaching strategies to the project. For example, a lecture theatre has two rows of seating per tier rather than one, so that it can perform in 'interactive mode', where the students turn their chairs to face each other, such as in a tutorial. Lyons designed and prototyped a series of custom table types to suit different teaching modes – some geometries accommodate arranging the tables in rows and some preclude that possibility.

It's an assertive aesthetic, maybe enough to make Roy Simpson turn in his grave? The two primary realms of architecture – interior and exterior – are allowed to clash and collide in this building, without much reconciliation. It all adds to the vibrancy and complexity of the visual experience. And it is the student and teaching experience that takes primacy in Lyons' design, both within the building and beyond. Maybe for Simpson, less of a turning and more of a winking. **ar**

04. The distinctive red paint colour at the pathway stair allows for ease of circulation and is a striking moment in the interior volume.

AVENUE

03

Location: Melbourne, Australia
Architect: Elenberg Fraser
Review: Peter Knight
Photography: Peter Clarke

01

02

Elenberg Fraser's recently completed Avenue apartment building, on the corner of Chapel Street and Alexandra Avenue, viewed from across the Yarra River, has a striking sense of sadness. With its gentle, curved surface billowing out, while also retreating from the corner, offering a soft visual gateway into South Yarra, how would anyone be able to paint *Bonjour Tristesse* way up on the facade?

The intended 25-storey tower by the previous developer, designed by Wood Marsh, shared formal cues with their Balencea Apartments. Interestingly named Tresor was an obvious reference to the highly influential Berlin techno club just up the road from Álvaro Siza's Bonjour Tristesse apartment building. Wood Marsh's design used the same fluting as the Balencea Apartments and applied it to Tresor, with a dominant flute on the corner, effectively creating the inverse of Elenberg Fraser's and Siza's approach to a corner. The difference is stark. Tresor dominated its site, with its sharp arises giving it a formal authority. Simple, elegant but mostly dominant. →

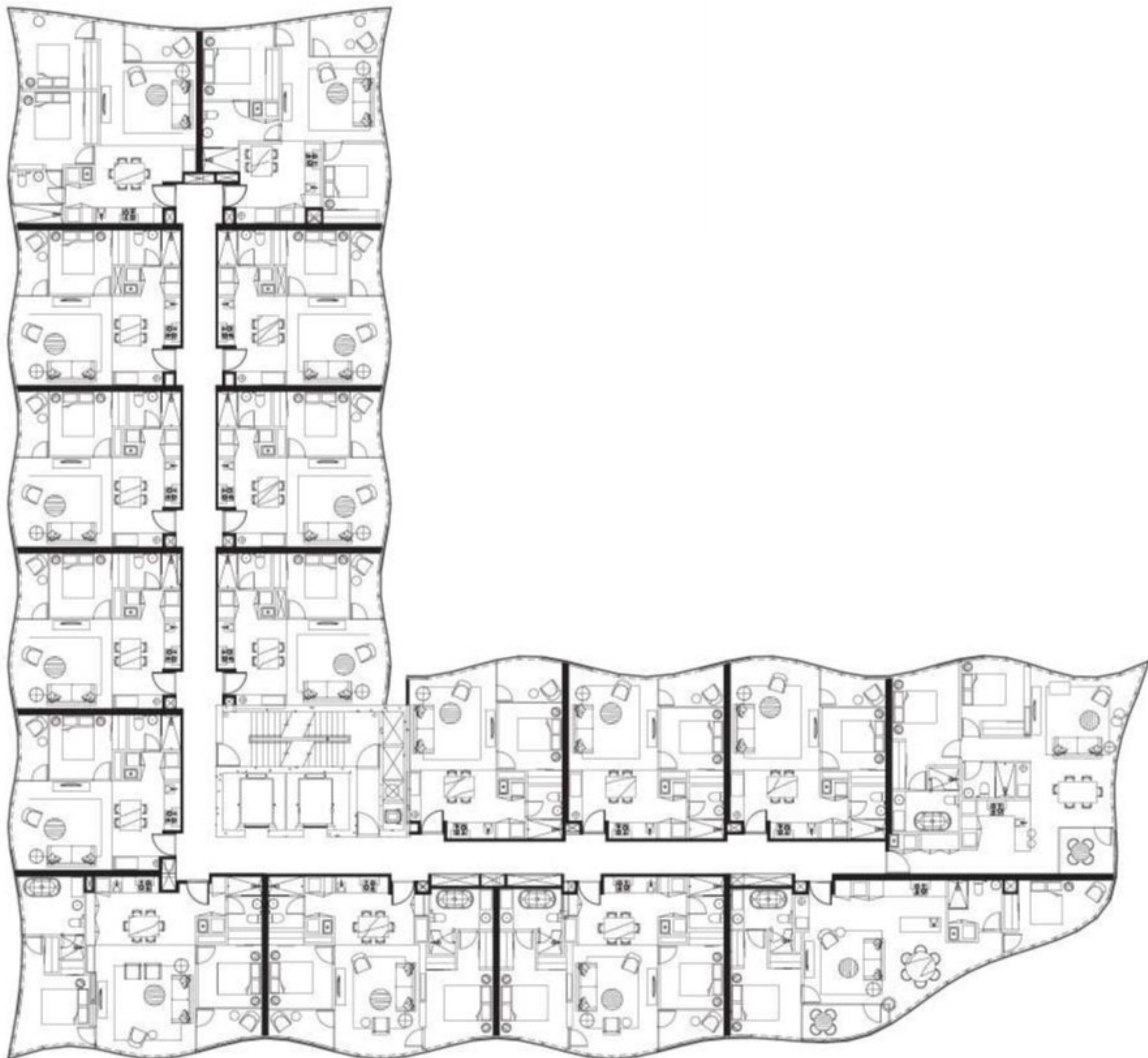**01.** The column is pulled back from the facade to allow for the curved corner detail
02. Open plan living spaces are offered maximum views of the city beyond with floor-to-ceiling glazing.
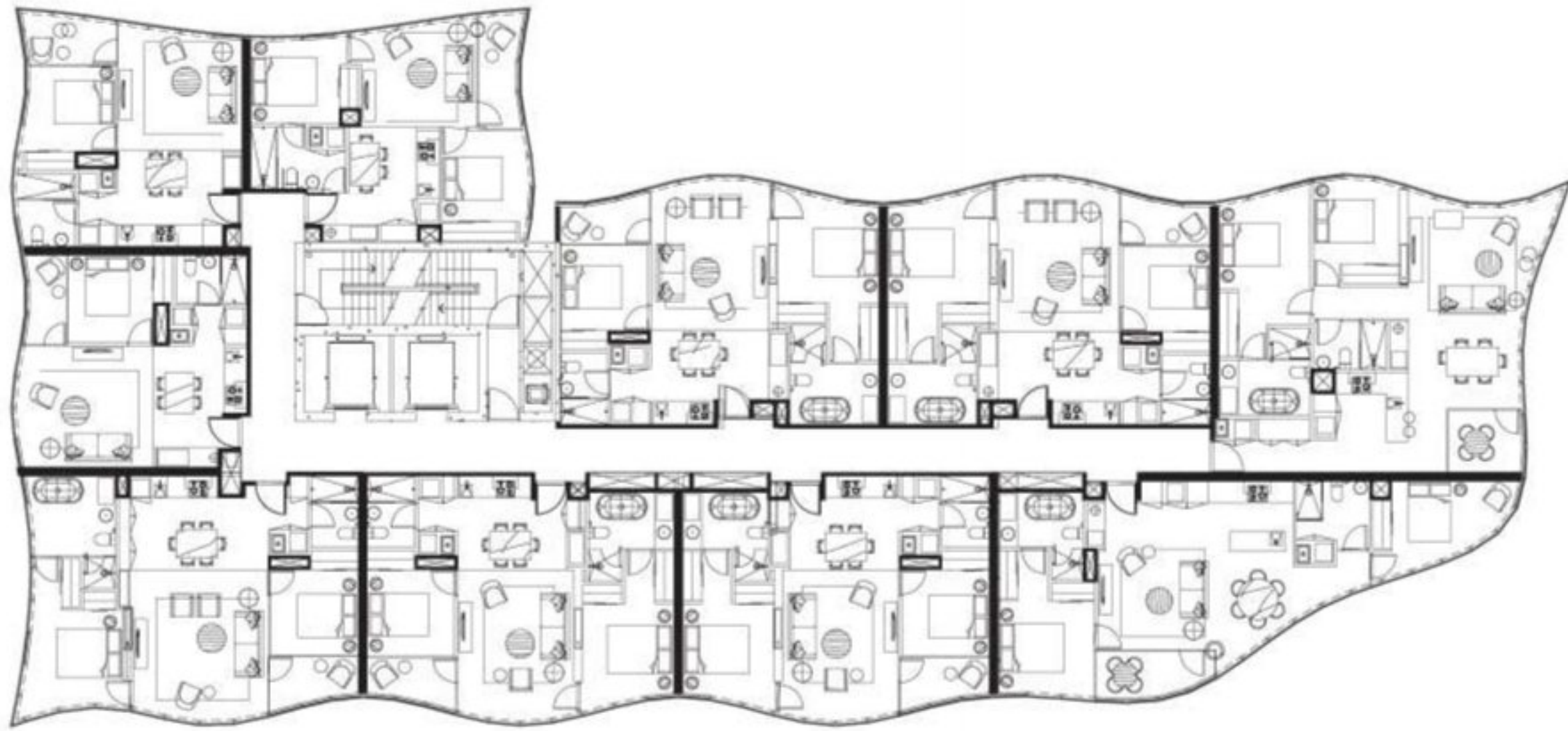
Typical High Rise Plan

Typical Low Rise Plan

04

→ Tresor, however, was deemed excessively tall and the site subsequently sold to its current developer. The school behind the site had reasonable concerns about the tower to its north and Lindsay Fox objected as he lands his helicopter on his old school's grounds. Elenberg Fraser then produced the 16-storey Avenue, seemingly not overly mocking the council's stated 12-storey (38-metre) limit to the north of Chapel Street – this limit was recently changed to 76 metres and overruled in favour of a 92-metre development.

Avenue has a striking purity, most notable through a lack of visible spandrels or mullions in its aptly named curtain wall. A series of regular smooth undulations across the facade resolve themselves in gentle points, apart from the main corner to the intersection. Here it skips an undulation and pulls back from the edge more than its regular geometry allows. In plan, this effective chamfer creates a somewhat awkward triangular plan on the corner, whereas for all intents and purposes, the bulk of apartment plans are loosely rectilinear. The overall plan forms an L-shape in its lower reaches, neatly containing what now seems a very quaint block of three-storey apartments to the west and pushing back in towards the school. Above five storeys it pulls back its western arm from the school and singularly addresses itself to Chapel Street. The internal planning is unsurprisingly efficient. This extends to the use of car stackers in the basement car park. Of note though, is the use of conservatories in each apartment,

typically providing a space between the facade and bedroom. This is combined with a series of casement windows. These banks of windows convincingly break the purity of the image, as they stamp their scale upon the curtain and hint at inhabitation behind.

It is this minor, uncontrolled hint that subtly animates the facade at close quarters. At mid and long distance, the curtain wall is dominated by its bronze solar-control IGUs, which, being highly reflective, pick up the surrounding fabric and distort it – incidentally the distortions are particularly pleasing to view from the freeway across the river. Other taller, noisier buildings come into view earlier, but with nothing surprising in form, materiality or location, they appear insignificant – the background noise on the other side of the sound barrier. Avenue signals itself with each panel acting as a mirror and all at slightly different angles, announcing itself with an irresistible subtlety. The visual background noise is disturbed as it breaks into shards upon the waving facade. Avenue refrains from announcing itself through its formal articulation, but more how this articulation registers its surroundings. The direction and intensity of light curates this process, with its articulated form lost to elevation and even, at times, the reflections.

This temporal nature makes the facade a pleasing success, with each viewing offering altered attenuations of the surroundings. This welcome subtlety starkly contrasts the choiring shout of immutable banality from some of its speculative neighbours. →

03. The south-western corner pinches to a point to emphatically announce the building
04. Typically Melburnian surrounding context of tramway lines overhead along the adjacent thoroughfare.

North Elevation

→ While distant views are best animated through light and locomotion, at street level, the detail of reflections can be read with clarity and the casement windows work at this scale to bring a range of unexpected reflections to the broader facade. The occasional window in movement draws the eye, as stillness moves and the typically mute typology speaks for a moment.

However it is this inhabitation that is particularly difficult to reconcile. By providing a conservatory rather than a balcony, the plan curates its facade with authority, neatly sidestepping the unpredictable facade domination of the balcony, sadly more a space of storage and condensing units than an optimistic animation of lived fabric. While Avenue's facade does cleanly respond to its inhabitants, there is no sense that it extends beyond its impenetrable fourth wall. The graffiti and pizza shop of Bonjour Tristesse, messy but suggestive of inhabitation of the street too, are not in evidence. At street level, ground-floor retail destined for a succession of businesses address the corner, while a mirrored canopy signals the overtly secure lobby entrance. The busy intersection seems amplified through the widened footpath and hot with reflected light from the sun, with no sense of sanctuary evident.

Perhaps this seems more lacking from a form articulated, such that it does not dominate visually, seemingly more compassionate than the original concept or Tresor designs? But, speculative property development is not primarily concerned with dwelling or community, with architecture walking a fine line among it. However, it offers something architectural beyond its private interiors, with an exterior that provides a mercifully broken and changing reflection of its surroundings, both in the middle and long distance views that is wholly generous. But inherent in its elegant formal simplicity is an escape from the street to the tower, which is not addressed. There is no surface to paint a message on, but it speaks anyway. *Au revoir à la rue* perhaps? **ar**

05. In its context the building is somewhat incongruous given its enigmatic facade
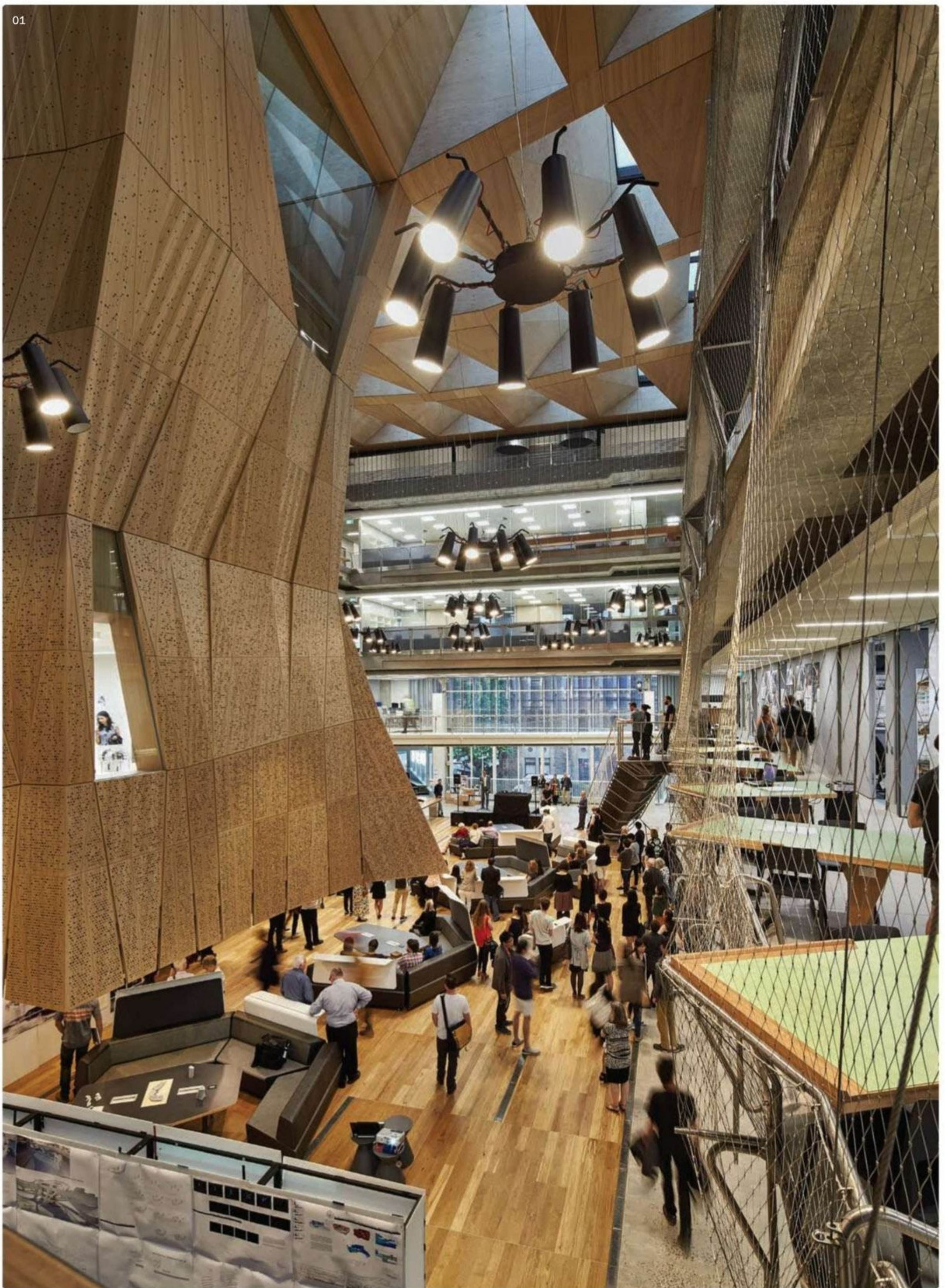06. The rippling facade shimmers in the changing light throughout the day.
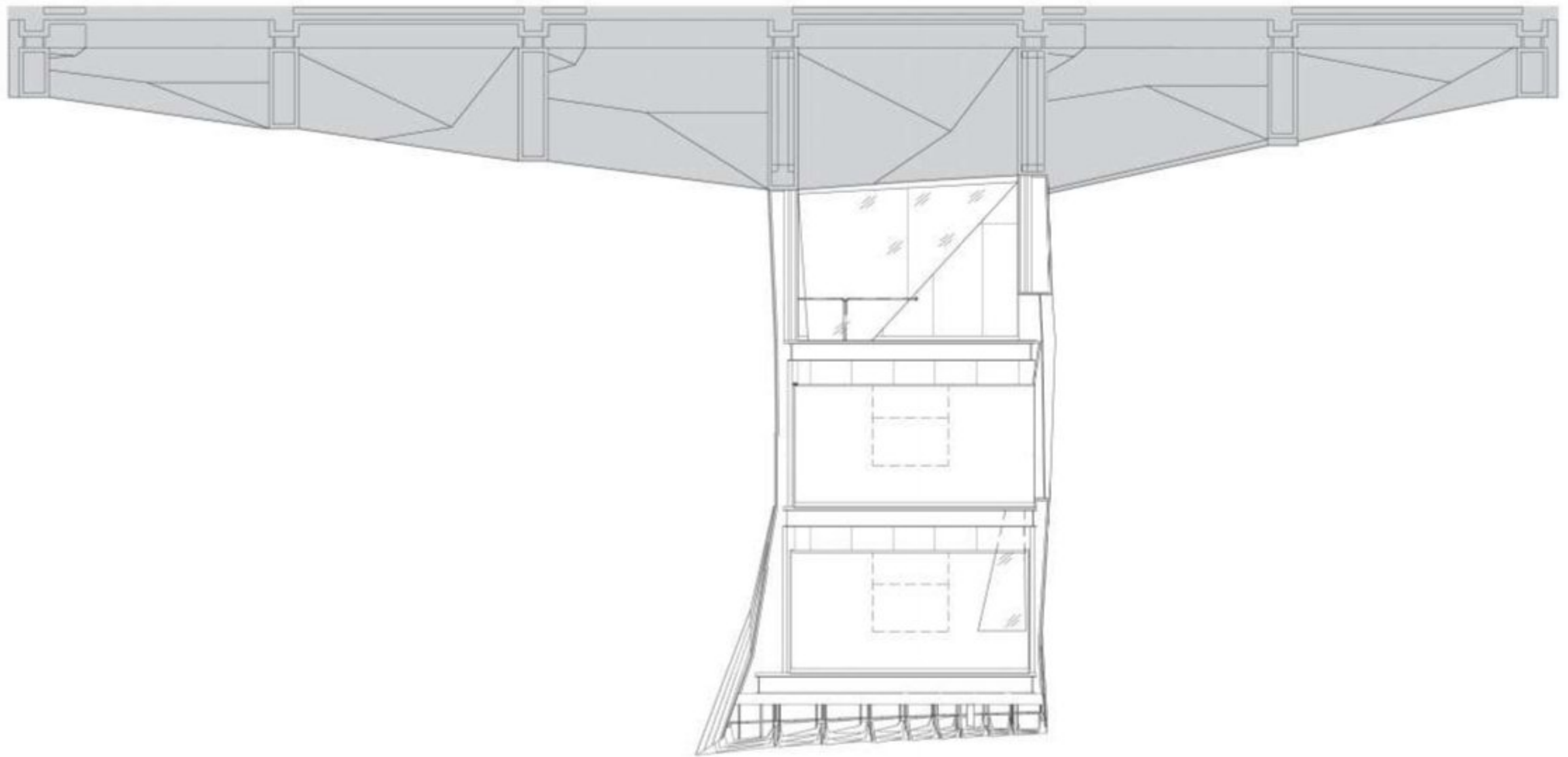
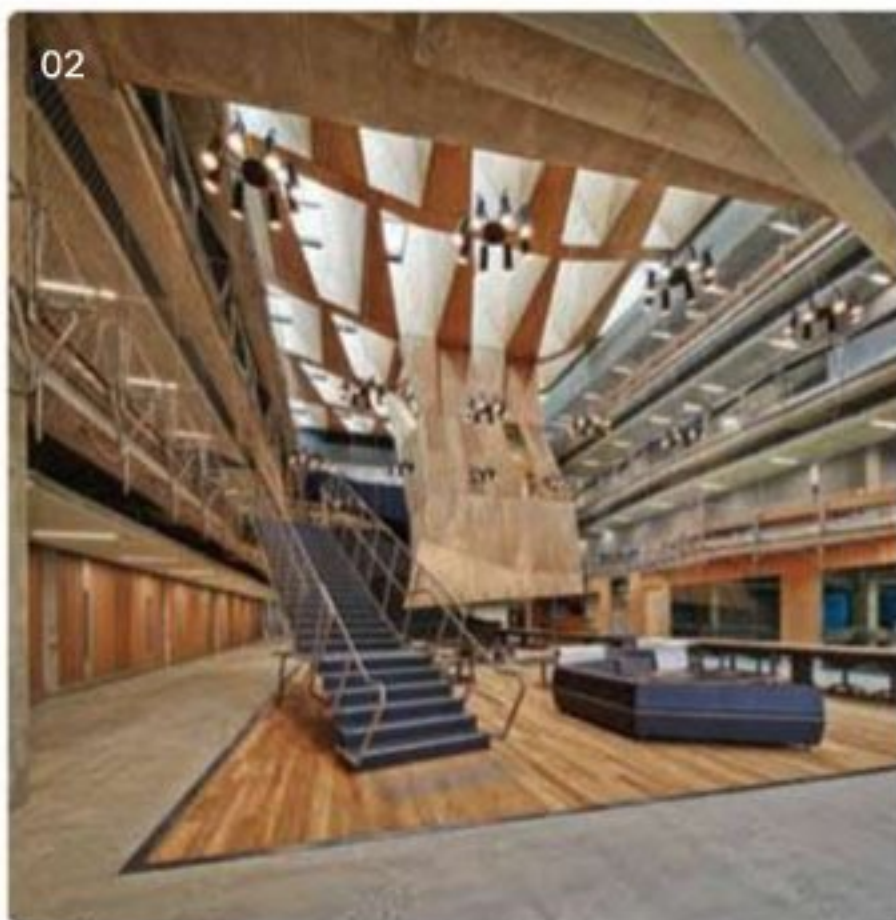# MELBOURNE SCHOOL OF DESIGN, THE UNIVERSITY OF MELBOURNE

04

Location: Melbourne, Australia
Architect: John Wardle Architects
in collaboration with NADAAA
Review: John de Manincor
Photography: Peter Bennetts

Hanging Studio Section

01. Expansive volume provides a cavernous, visually engaging interior
**02.** Stair access to upper levels drop into the atrium space.

At the opening of the Melbourne School of Design (MSD) at the University of Melbourne, designed by John Wardle Architects in collaboration with Boston-based architecture studio NADAAA, many of the speakers described the new building as 'representing the values of the university' as 'built pedagogy', comments reiterated in press releases and online reviews. The comments suggesting that buildings can convey meaning, that they form a narrative.

Whether buildings can be 'read' has been debated for more than fifty years, with no convincing conclusions yet. The Poststructuralists provided the most compelling argument, indeed Jeffrey T Nealon in 'The Swerve around P: Literary Theory after Interpretation' (*Postmodern Culture*, Volume 17.3, 2007) suggested individual interpretation outweighed the importance of the product. Assuming for a moment that it is possible to read buildings, what is the font? What are the elements of architecture that not only the users, but also the consumers of architectural media, read? Swiss linguist Ferdinand de Saussure would ask 'what are the signifiers?' Following this line of investigation, does the configuration of elements (signifiers) contribute to the narrative to allow us to understand what is being signified? These are all questions of the representation of architecture.

Like a find-your-own-adventure novel, there are multiple ways to experience and interpret the MSD building. It sits as a hefty volume of many chapters on the site of the former architecture school, a building experienced in the round and approached from various directions. Each facade takes on a different character, including a remnant historic elevation of the former Bank of New South Wales. The ground level facades are transparent, providing glimpses into exhibition spaces, the library and workshops, which open directly onto a public courtyard. The ground level conceptually invites passers-by to participate in the life of the school – although with power tools roaring there may be the odd OH&S issue with crowd participation. The internal cross route via the inner workings of these spaces is open to all, but unless otherwise advised some would remain blissfully unaware of the configuration of the school above. While those in the know access the school internally via a wide stair with tall-blackened steel balustrade, others enter externally from a traversable amphitheatre. One level up from the everyday life of the campus is the signature internal space of the school: the Design Hall, MSD's social epicentre. It is here the primary plot is immediately revealed: a four-level, top-lit atrium with an exquisitely detailed coffered timber structure from which 'hangs' an intriguing folded form. However, given such an important space is not obviously shared with the life of the university, it questions the transparency theory and the values it suggests.
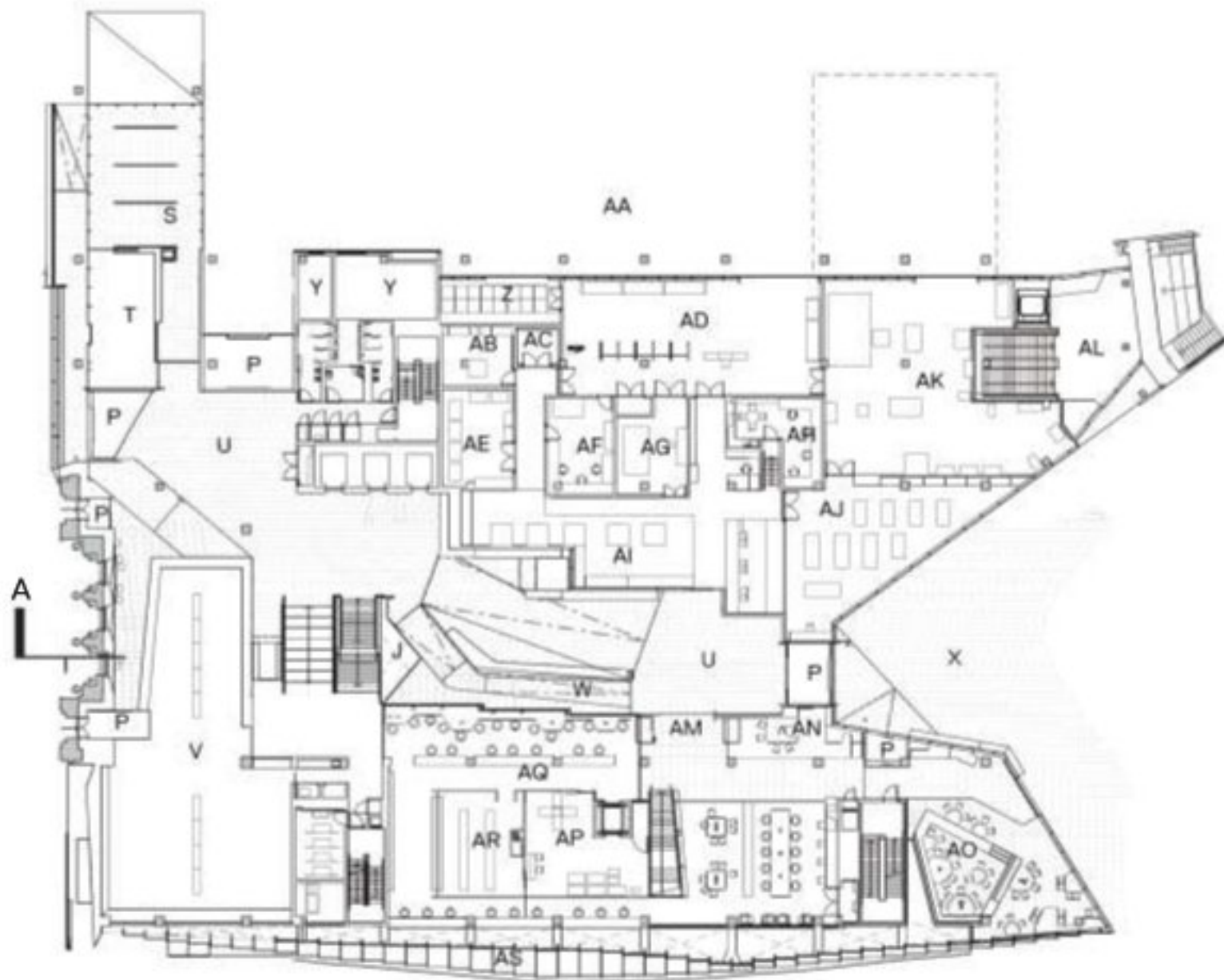
The Design Hall is the most challenging space in the project; the obvious reading is it represents the collective heart of the school. The generous galleries that circumnavigate the space are equipped with quirky seating and collaborative worktables attempt to act as the studio spaces the budget did not allow for, but the culture of →
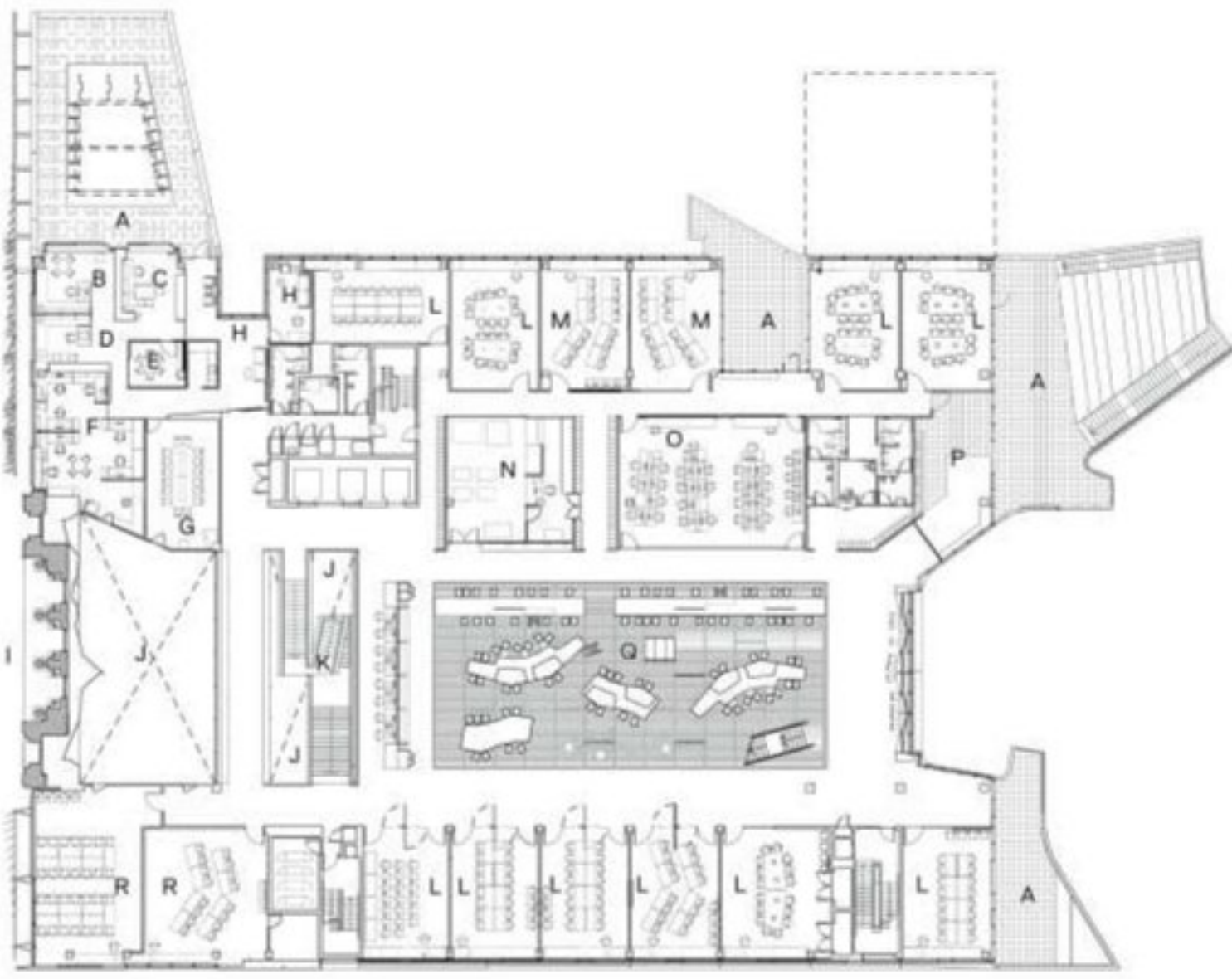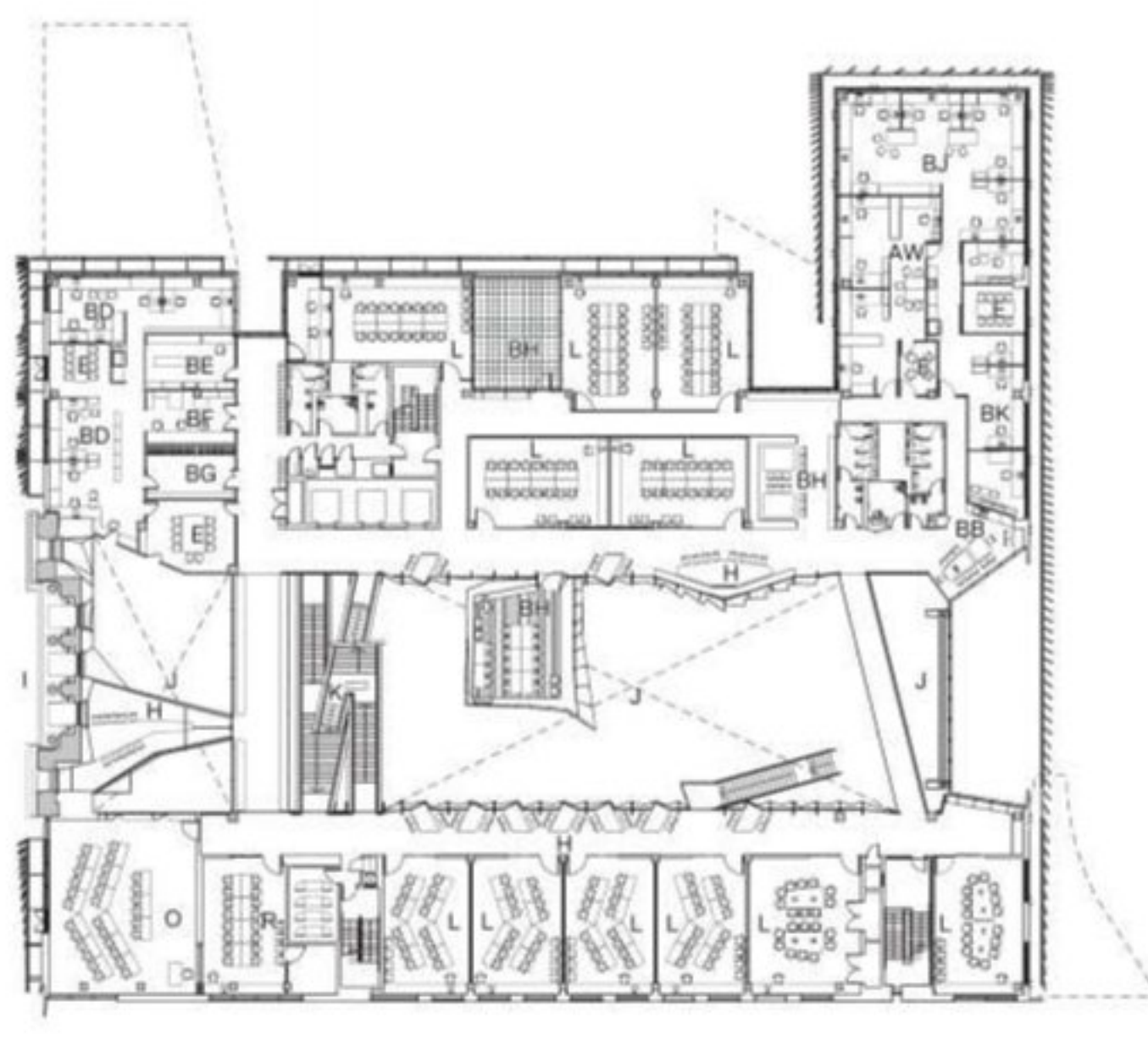
Level One
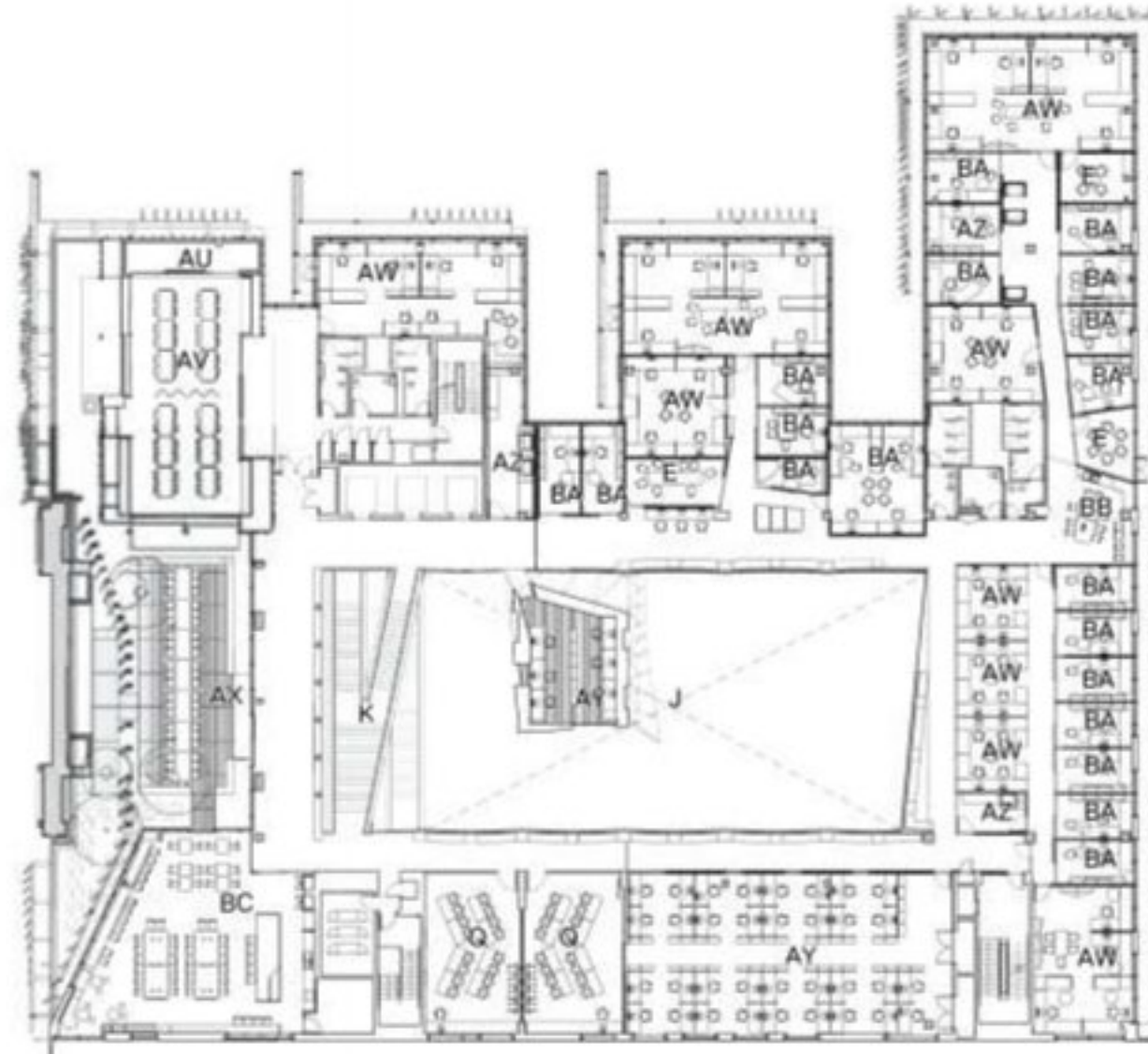
Level Four

Ground Level

Level Two

→ a vibrant architecture school demands. Nader Tehrani (NADAAA) notes that 'once the budget deemed it impossible to provide dedicated studio spaces, with one desk per student, the design mission was transformed to creatively redistribute the net-to-gross relationship of the building [...] to carve social spaces and spaces of learning in what is conventionally the space of circulation'.

The galleries allow for views across the space and down to the lower level, visually connecting people and animating the interior. This strategy is de rigueur in contemporary shopping centres, offices and academic buildings that embrace Herman Hertzberger's social agenda of the 1960s. The quality of detail across the project is exceptional; more refined than either of the architects' other design schools. The material palette, particularly the Design Hall, is sophisticated and sombre, lighting →

03. Angular timber panelling is exquisitely detailed
04. Clashing materiality offers an industrial feel to public spaces
05. Structural members bisect various planes
06. The contrasting form of the existing campus fabric is refreshing yet considered.

A Terrace
B Dean's office
C Deputy dean's office
D General manager
E Meeting room
F Dean's support staff
G Conference room
H Informal space
I Heritage facade
J Void
K Y stair
L Design studio
M CAD studio
N Print room
O CAD lab
P Airlock

Q Design studio
R CAD studio
S Small exhibition
T Cafe
U Foyer
V Large exhibition
W Creek bed
X Entry courtyard
Y Plant
Z Workshop wet space
AA Workshop external space
AB Metal workshop
AC Spray booth
AD Workshop storage
AE Laser cutting room
AF Workshop digital control
AG CNC router
AH Workshop office
AI Model making space
AJ Workshop bench space
AK Machine workshop
AL Large lecture theatre foyer
AM Library entry
AN Library service desk
AO Library collaborative space

AP Returns room
AQ Library collection
AR High use collection
AS Skylight to library below
AT Landscaped berm
AU Furniture storage
AV Japanese room
AW Open academic workspace cluster
AX Japanese terrace
AY RHDS
AZ Utility
BA Enclosed workspaces
BB Kitchenette
BC Staff lounge
BD IT workspace
BE IT reception
BF IT store
BG Mail and stationery
BH Project space
BI Suspended studio
BJ Engagement workspaces
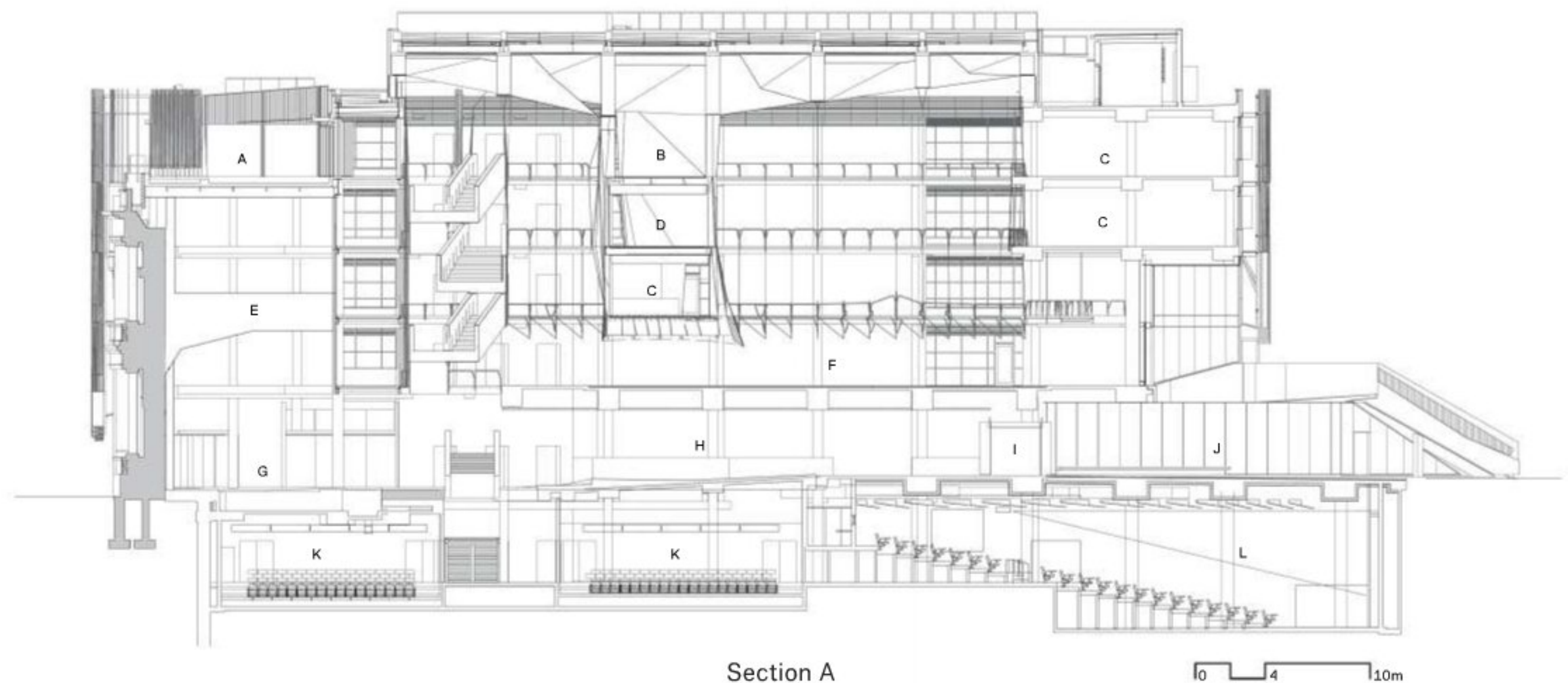BK Advancement workspace.

03

04

05

06

Section A

→ and furnishings border on the domestic. With the addition of plants and a water feature the space might even resemble the wonderful atria in a number of hotels by John Portman in the 1970s. Of course every book has multiple readings. One is that students take great delight in the idea that someone will always be looking out for them and that there is much to be learned from others occupying the space. The opposite take is that it is overbearing. The curious floating timber form could be mistaken as the school's central surveillance centre contained in an inverted conning tower. First year students arriving for day one of their course might think that big brother is watching. With few spaces to escape the gaze of others, it is easy to imagine the most popular lounges on the lower level of the Design Hall being those under the suspended meeting spaces or within them.

The language of architecture is a particularly difficult one, not everyone can read it. Before text, ancient cultures relied on oral histories from informed elders to understand their stories, values and laws. In our discipline too, the voice of the architect must be considered. John Wardle responds to the question on the possibility of the building to be read as 'built pedagogy', noting 'it's really more about evoking a sense of curiosity'. While in some instances, such as the library's expressive beams and the basement window that showcase the retaining walls, the 'built pedagogy' is obvious, there are numerous interesting moments of intense detail and craft in both the envelope and interior that prompt both 'how did they do that?' and the rhetorical 'why?'. It is this sense of intrigue that is the most successful strategy in the project, one that prompts the reader to flick back a few pages and check they have not missed something.

Unlike novels, buildings take on a different life once they are occupied; their stories are constantly rewritten as occupation patterns defy the intent of the architect and their clients. Thus the fable of MSD is not yet complete, perhaps it never will be. Its next edition will be partly autobiographical as thousands of students are yet to make their mark. Like a much-loved novel, this building will become better with age; when the pages are dog-eared and stained with red wine and coffee, it is likely to be even more intriguing. Pick it up again in a few years – it will remain significant and represent an ever-evolving history. **ar**

07. North-western corner cantilevers over external public space
08. The south elevation is subtle in its curving glass facade at ground level.

Section (above)
A Japanese terrace
B RHDS
c Workspace
D Project space
E Study/crit
F Studio hall
G Large exhibition space
H Foyer
I Entry airlock
J Entry courtyard
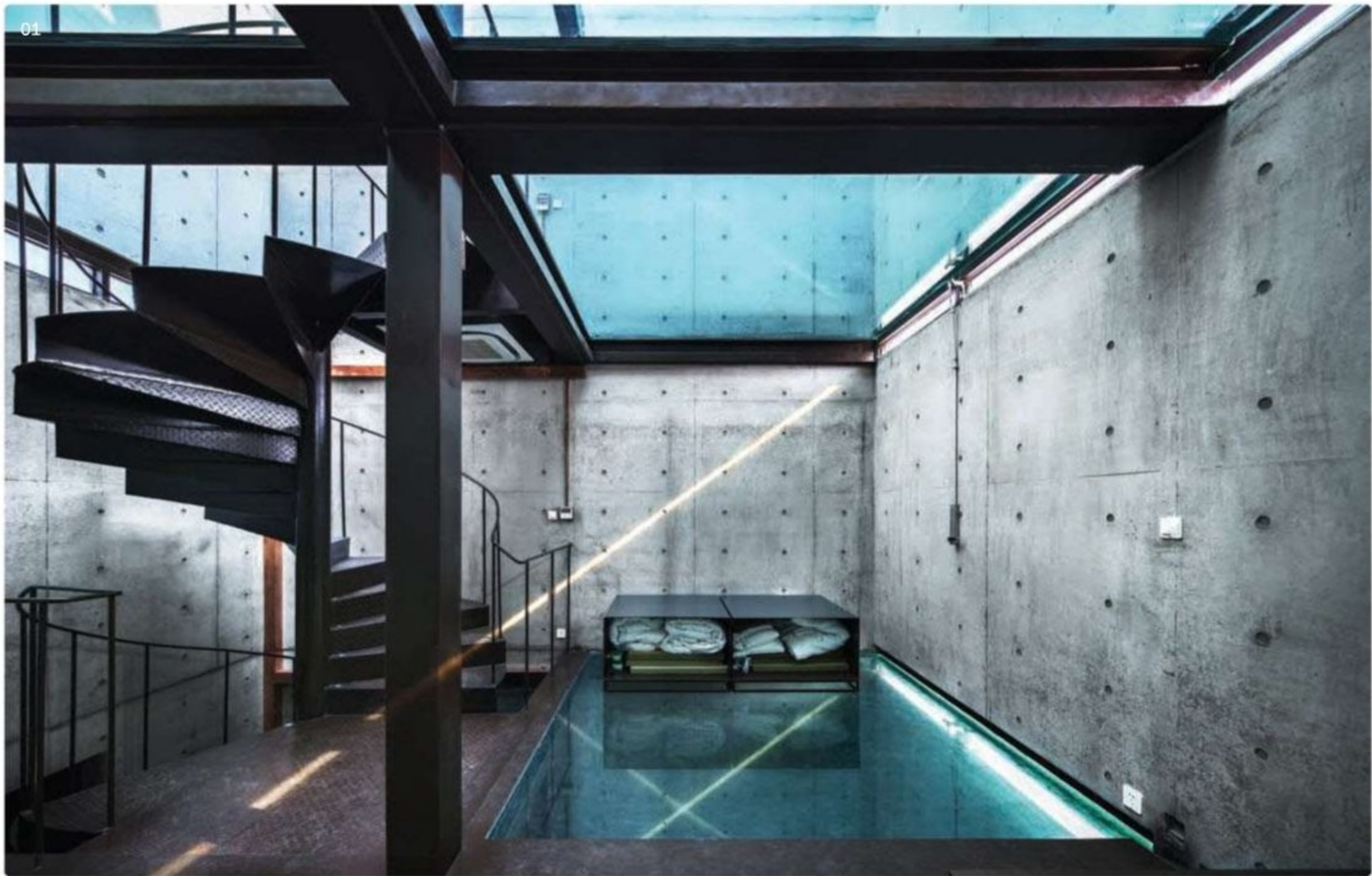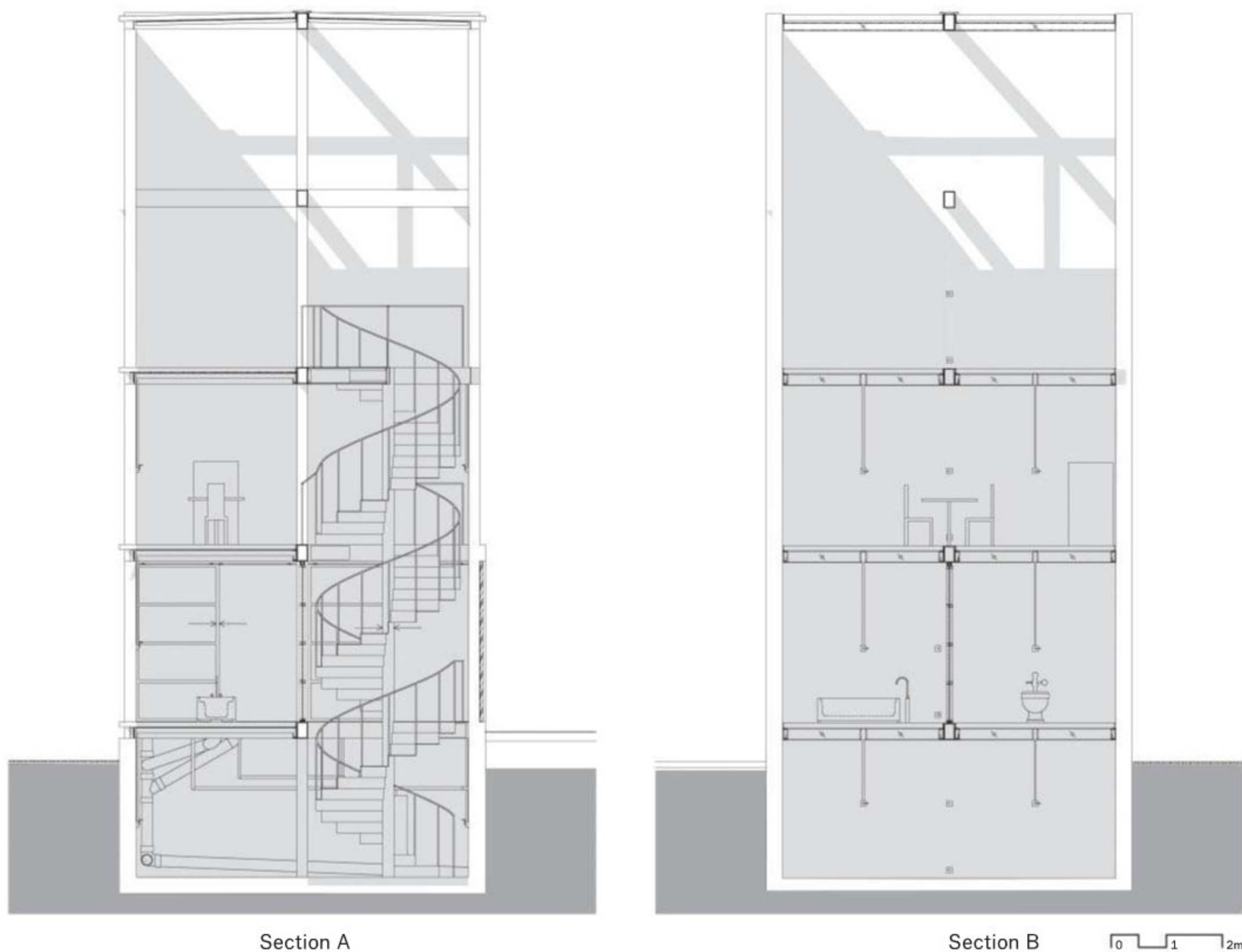K Medium lecture theatre
L Large lecture theatre

VERTICAL GLASS HOUSE

05

Location: Shanghai, China
Architect: Yung Ho Chang / Atelier FCJZ
Review: Clare Jacobson
Photography: Hengzhong Lv

Section A

Section B

Along the west bank of Shanghai's Huangpu River, set within Longyao Riverfront Square promenade, stands a 13.5-metre concrete tower. The thin bunker-like building, with rows of horizontal slit windows, appears ready to take on invaders from the Huangpu or, perhaps, the nearby skate park. But the exterior is deceptive. Upon opening the heavy steel door at the entry there is a rough facade, like that of a geode, at first concealing then revealing a light-filled interior. Yung Ho Chang / Atelier FCJZ's Vertical Glass House is in fact anything but aggressive. Instead, it is an inward-looking residence, both physically and metaphysically.

The 'glass' of the building's name refers to the green transparent material of the floors and ceilings that run from basement to roof, offering a continuous interior view from earth to sky. Rooms move from corporeal to ethereal as one ascends through the house: mechanical systems occupy the basement; bath, toilet and clothes drying the first floor; kitchen, dining and bedroom the second; and an empty, double-height space the third. The glass throughout creates a mise-en-scène of people within. Whether contemplating the universe under the clear roof or fussing with the water heater in the basement, visitors' activities are visible from every point in the dwelling.

The building's plans, like its sections, are composed of simple geometries. Each square floor, with a footprint of less than forty square metres, is cut into sections via steel beams that intersect at a central column. Stairs run up the north-east quadrant, plumbing down the north-west. Steel furnishings designed by the architects are placed centrally within the quadrants. The scheme's perfectly composed rectangles might seem like a study of classical dimensions, something produced centuries ago at L'Ecole des Beaux Arts. But the contemporary building materials, along with a new refrigerator and IKEA mugs by the sink, bring the visitor back to today.

A quick visit to the small house offers a simple reading: a stimulating view up through the minimally furnished floors, →

01. Structural members are accentuated and act as partitions between living spaces and vertical circulation
02. A curious relationship between the toilet and the dining area above emphasises the notion of programs blurring together
03. The eye is drawn skywards throughout the building, the bath sits directly below the living area.
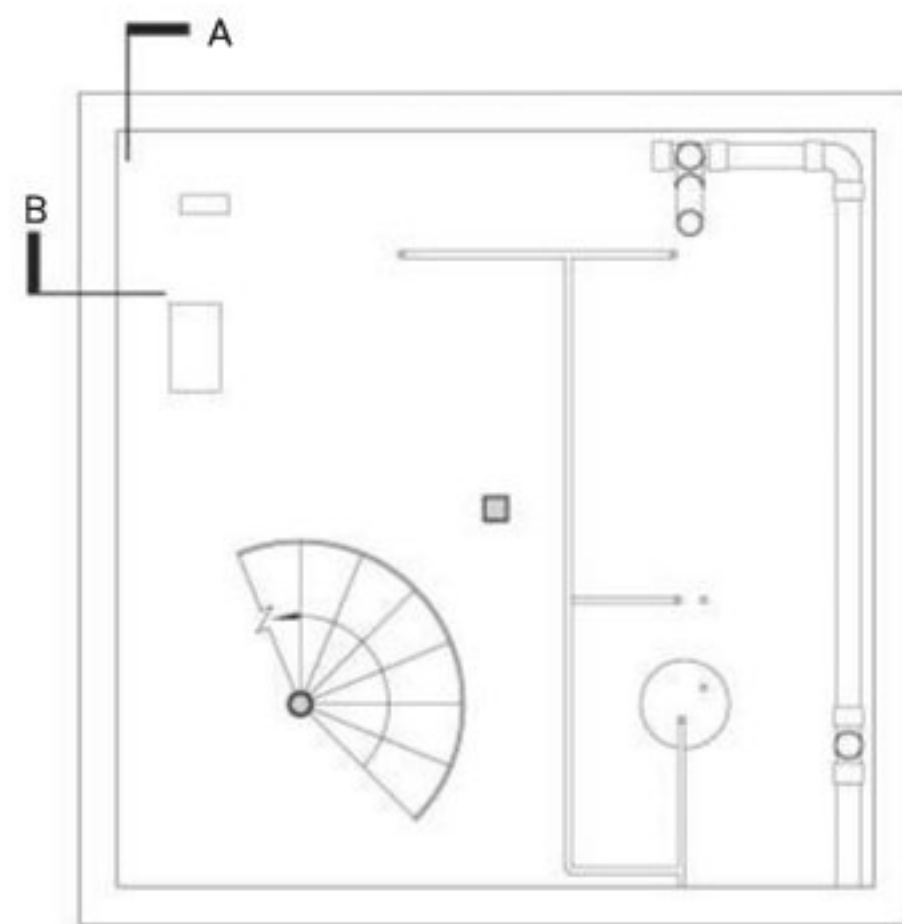
Basement
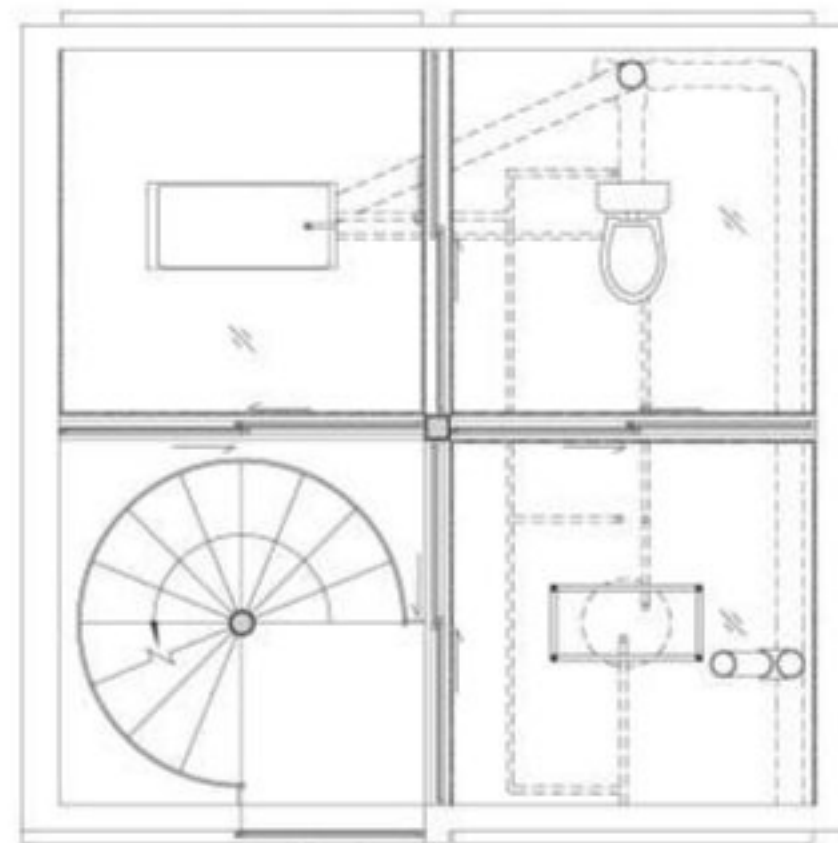
Ground Level
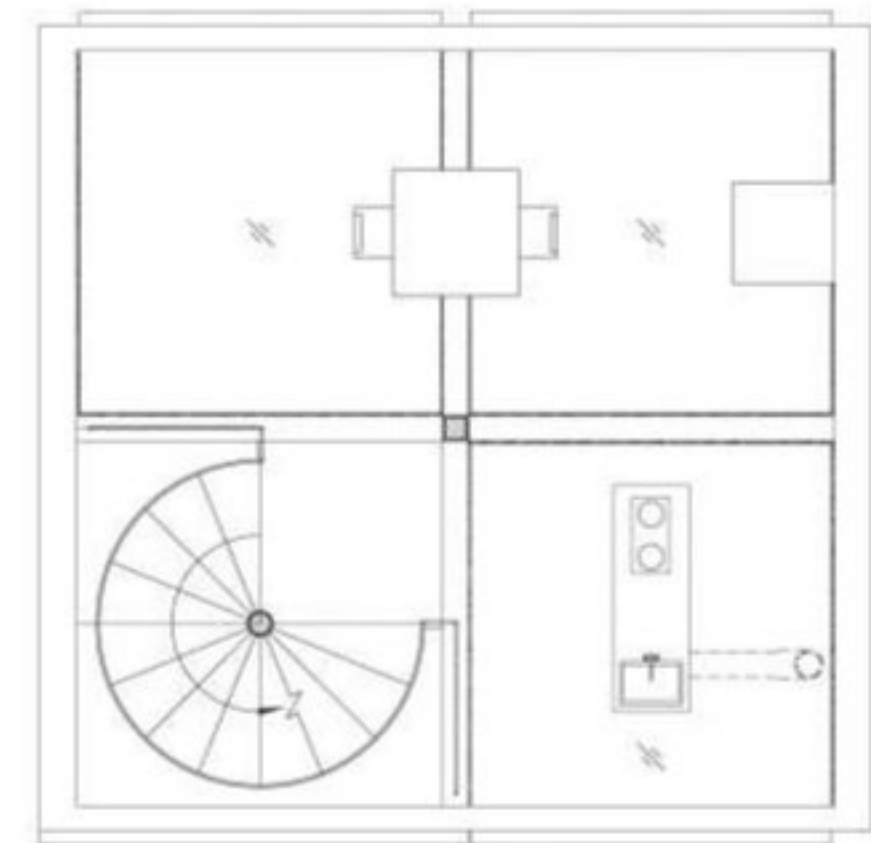
Level Two
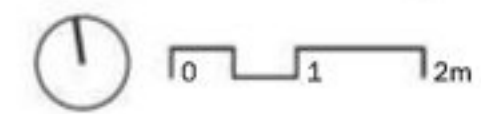
→ a spiralling ascent on a steel stairway and a somewhat anxious glance down (for those with acrophobia). Actually occupying the space produces a very different experience. Beijing-based architect Chang, co-founder of Atelier FCJZ, spent two days in the Vertical Glass House with his wife and partner, Lijia Lu. The glass suggested to him an omnipresent viewer, he says, and so each simple action he took within the house became ritualistic.

Atelier FCJZ states that the project is 'a critique of Modernist transparency in horizontality'. The Vertical Glass House can be compared to Mies van der Rohe's Farnsworth House, turned on its head, from a rancher spread out on an Illinois lawn to a tower in über-urban Shanghai. The building is also turned inside out. Mies' voyeuristic glass facade is mimicked in FCJZ's floors and ceilings, with its interior privacy walls here reproduced as exterior walls, shielding views from not-yet-existent next-door neighbours.

The house's not-distant neighbours include new complexes of residential towers, with names such as Venezia Shanghai Riverside Garden. Other neighbours are former industrial and aviation buildings that are in the process of being converted into cultural centres; two recently opened centres of contemporary art include the Yuz Museum and Long Museum. Both sets of buildings are part of the West Bund, a 1740-hectare redevelopment site. In 2013 the first West Bund Biennale of Architecture and Contemporary Art promoted art and design as catalysts for the area's redevelopment. Chang was a curator

of the biennale and he built the Vertical Glass House as part of the event and to attract future experimental projects.

The Vertical Glass House design originated long before the 2013 biennale, however, designed by Chang in 1991 (two years before he opened Atelier FCJZ) for a housing competition organised by the magazine, *Japan Architect*. Copies of his 1991 drawings now hang on the walls surrounding the dining table of the completed house. The design of the building changed little from these drawings to its execution by FCJZ, with minor modifications to windows, plumbing and air-conditioning.

The lack of change corresponds with the notion that the building is site-unspecific. Instead it is a realisation of a concise twenty-two-year-old idea. While the house does share elements with FCJZ's current work – most notably its focus on materials – it is more akin to other, earlier studies that critique the Modernist square. Think of Peter Eisenman's 1975 House VI or Bernard Tschumi's 1987 Parc de la Villette. The Vertical Glass House shares their focus on geometry-driven theory over inhabitation.

One might say that the Vertical Glass House is as much a folly as Tschumi's park structures and more a landmark than an actual home. Chang says that the house will be used as a temporary home for visiting artists and architects during the next West Bund Biennale of Architecture and Contemporary Art. For now, it stands empty in its park setting.

Must the building be occupied for it to be considered a real house? If so, then the purchased-but-uninhabited units of →

04. The insular nature of the building, with minimal fenestration on its elevations, allows for diffuse light to filter through the building.

05
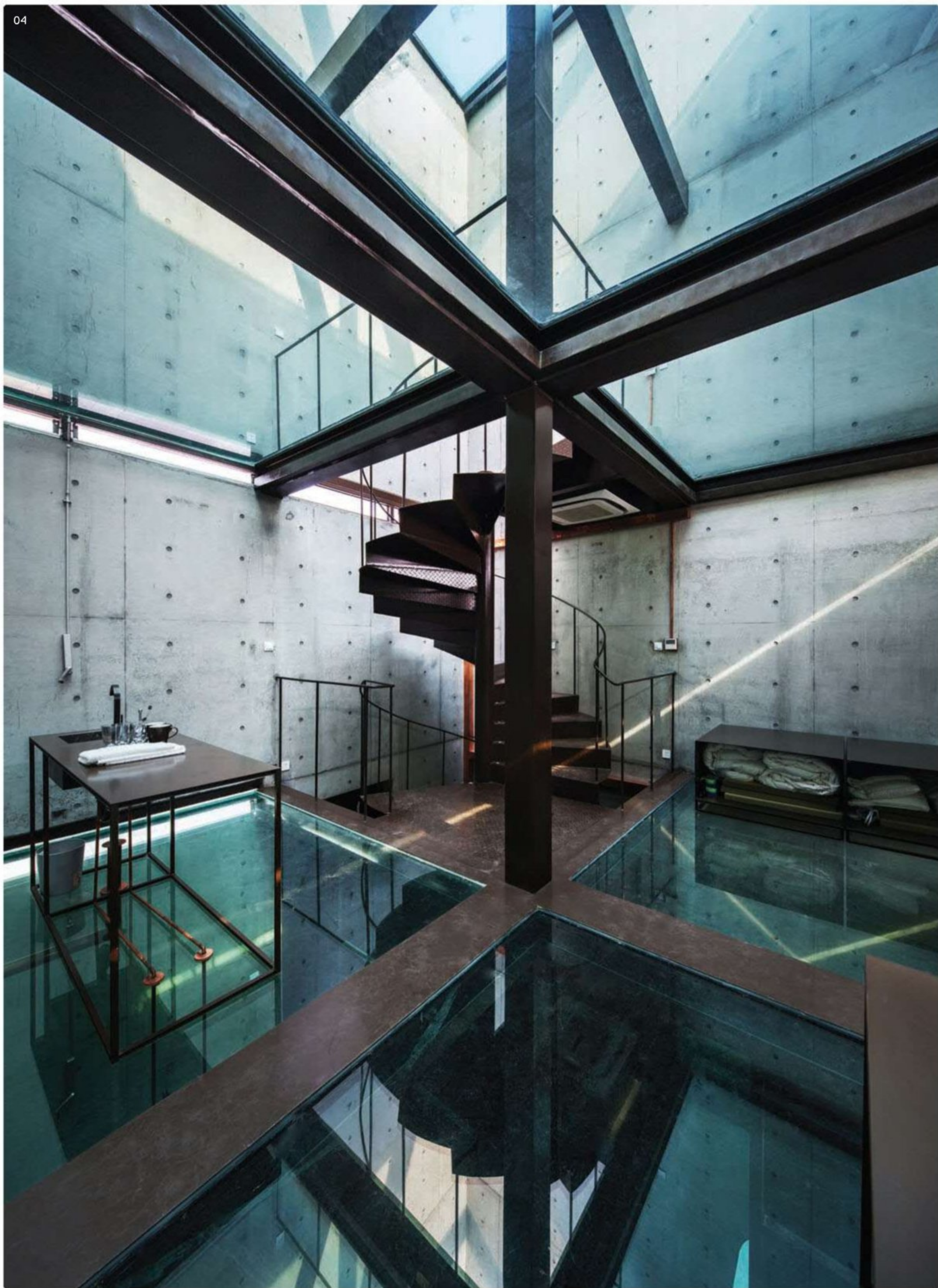
→ Venezia Shanghai Riverside Garden and so many other Shanghai apartment complexes would not be deemed houses. They dot the city with empty rooms and standardised layouts that have no potential to influence design or inhabitation. Instead, they say to Shanghai that there is only one viable, real estate-driven model for housing. The Vertical Glass House – folly or not – suggests that the house is a building type that can be explored endlessly and creatively. **ar**

ARCHITECT: Atelier FCJZ / PRINCIPAL ARCHITECT: Yung Ho Chang / PROJECT ARCHITECT: Lu Bai / PROJECT TEAM: Li Xiang Ting, Cai Feng / LOCATION: Xuhui District, Shanghai, China / CLIENT: West Bund / BUILDING AREA: 170sqm / TYPE: Housing/exhibition.

05. Fenestration is minimised and acts as a horizontal banding to reduce the scale of the vertical shaft. The building's austere form is more akin to urban infrastructure than a dwelling
06. Yung Ho Chang's original water colour plans, drawn in 1991, created two years prior to Atelier FCJZ's formation.

Section (right)
A Composite laminate tempered glass roof
B 300 x 2900mm inoperable window
c Interior finish: cast in-situ concrete, vertical wooden board formwork, semi-rough finish
D Exterior finish: cast in-situ concrete, steel formwork, smooth finish
E 200 x 300mm beam welded to pre-positioned steel plate in concrete
F 200 x 2900mm operable opening
G Recessed tube lighting in 70 x 200mm custom steel channel
H Composite laminate tempered glass floor
I 5mm embossed metal stair surface
J Concrete steps with 5mm embossed metal surface
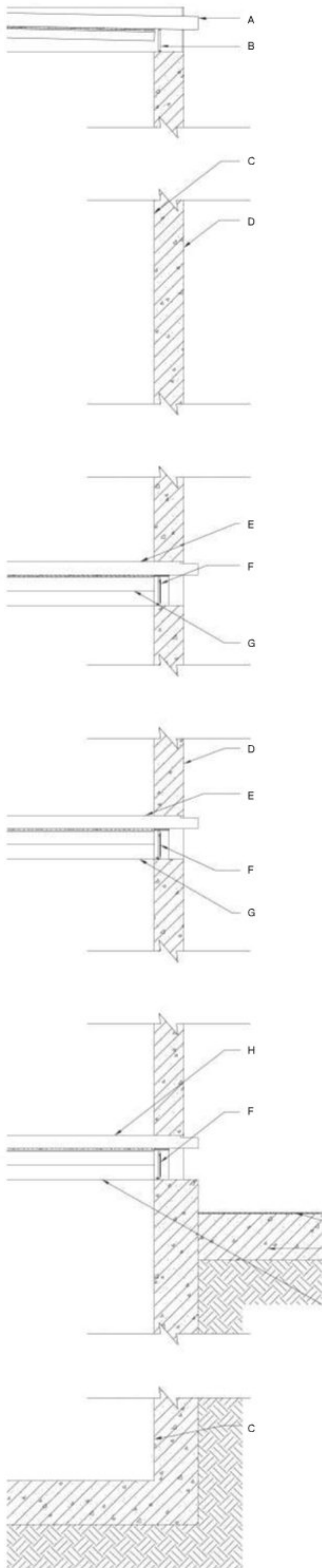
Section through Glass
Cantilever
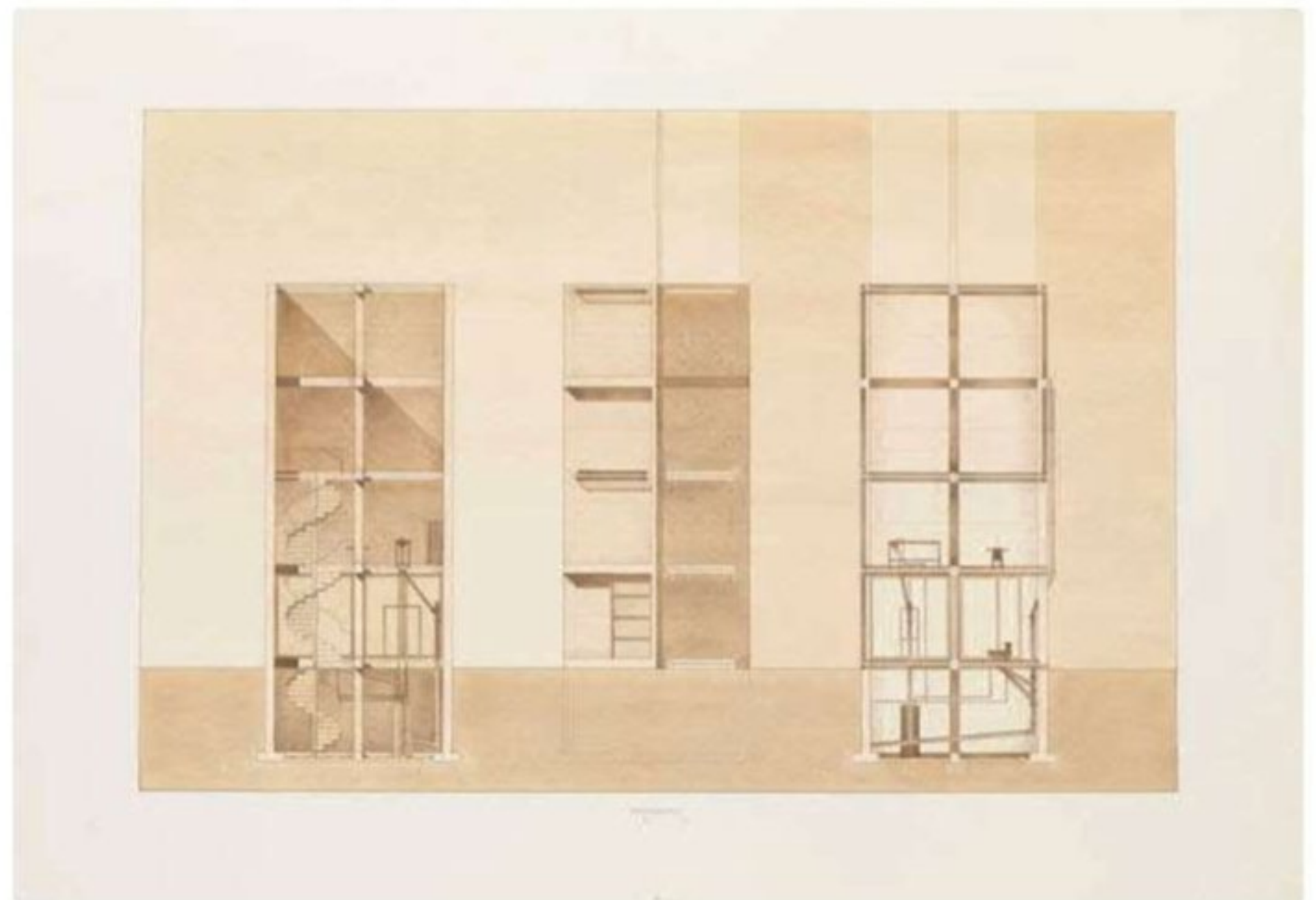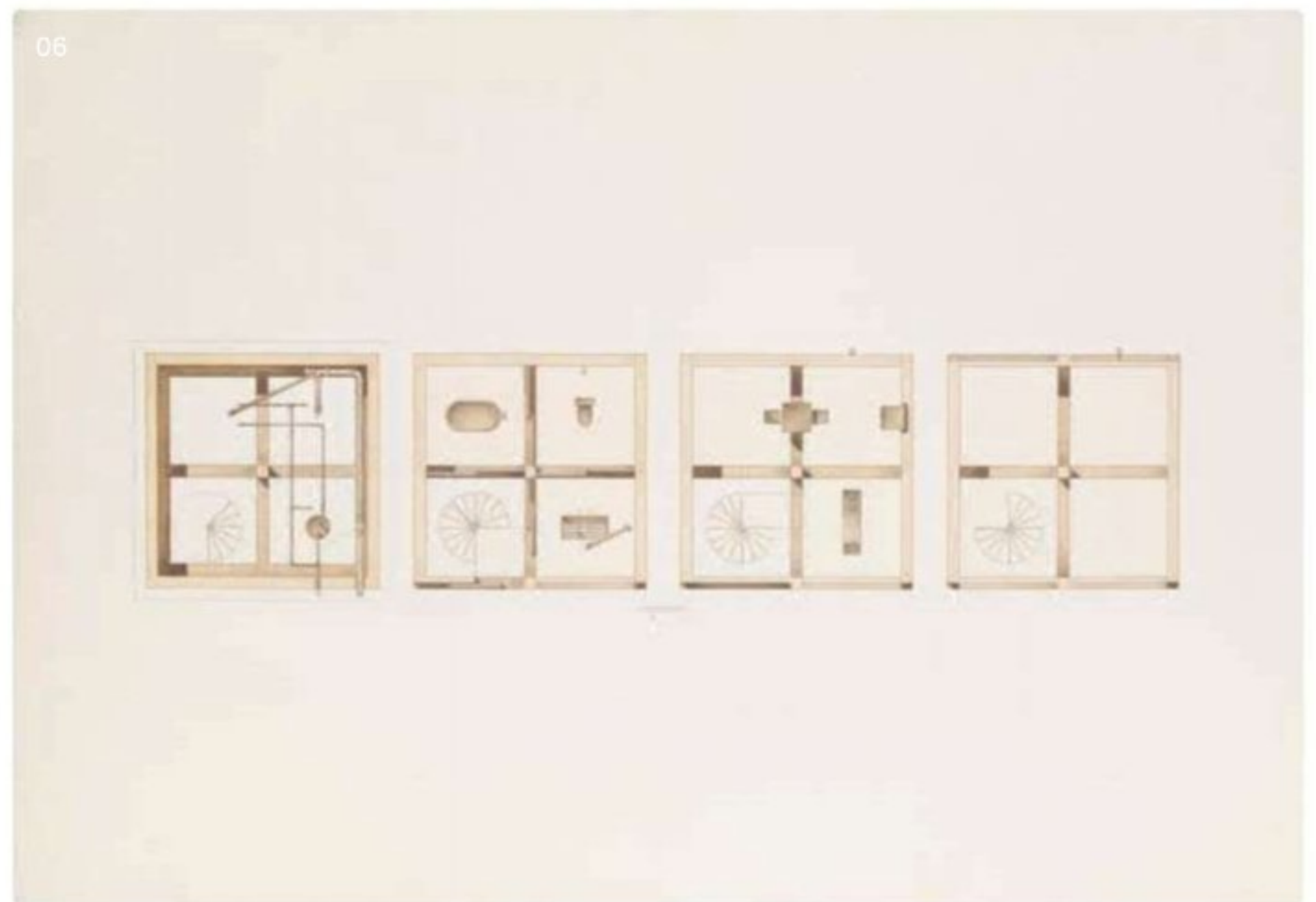
180 ELIZABETH STREET

o6

Location: Sydney, Australia
Architect: Bates Smart
Review: Peter Mould
Photography: Brett Boardman
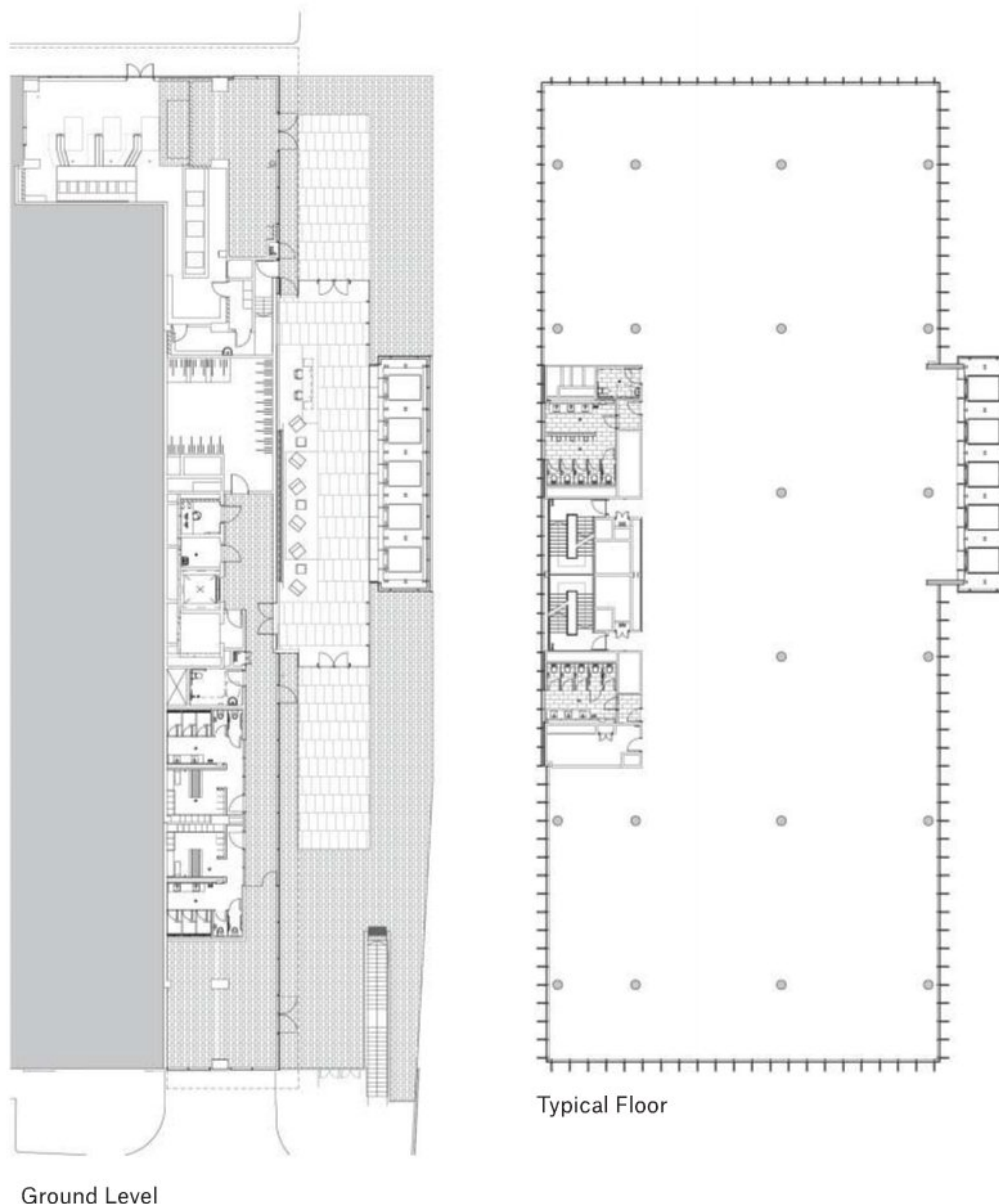
Ground Level

Typical Floor

The Haymarket area sits on the south-west fringe of Sydney's CBD and has been undergoing gradual change over the last thirty years. The City of Sydney and the State Government's Sydney Harbour Foreshore Authority control some of the land and, before 1998 the Darling Harbour Authority, resulting in variable built form and greatly varied height controls. Chinatown's bustle and tight urban grain is located within the precinct, with Bates Smart's 180 Elizabeth Street existing site to its west in a mixed urban context of institutional, residential and commercial buildings. Overall, aside from a number of Heritage remnants, the surrounding building stock is of mostly unremarkable quality.

The commission for the project was won through a City of Sydney Design Excellence Competition. This process awards bonus floor space if an architectural competition is held and design excellence, in the eyes of the jury and the City of Sydney, is achieved.

The brief required commercial office space above an existing three-storey electricity substation. Within this infrastructure, allowance had been made for future structural loads and vertical circulation, but with a central core constraining the potential layouts of the floors above.

Bates Smart's winning entry responded to these constraints with a series of strategic moves. It placed large trusses above the substation, freeing the upper floors from the existing column layout and allowing much longer spans for the office space. It also allowed the building to cantilever beyond the substation and so increased each floor area by 300 square metres. The architects pulled the lifts to the western edge of the building, allowing an uninterrupted floor plate and, by glazing them, animated the adjacent public domain; this also pushed the escape stairs, amenities and service risers to the east, giving a visual buffer to the adjacent residential building.

Finally, a lightweight steel frame and chilled beam cooling system allowed tighter floor-to-floor heights and the addition of an extra floor within the height controls.

The substation was clad in precast concrete panels to give visual weight to the building's base. The new trusses were clad in metal and expressed in the architectural composition, with the new office accommodation reading as a simple glass box floating above a solid base, its horizontality interrupted only by the lift shaft.

The combination of shifted lift core and cantilever extension allowed for a full-length glass-enclosed lobby three levels below the offices. The lobby faces the Goods Line (featured in Under Construction, p018), Sydney's version of New York's High Line →

01. Artistic spaces are both inviting and invigorating for users and passers-by
02. A robust building that rises from the site boundary and is emphasised by subtle lighting at the mezzanine level.
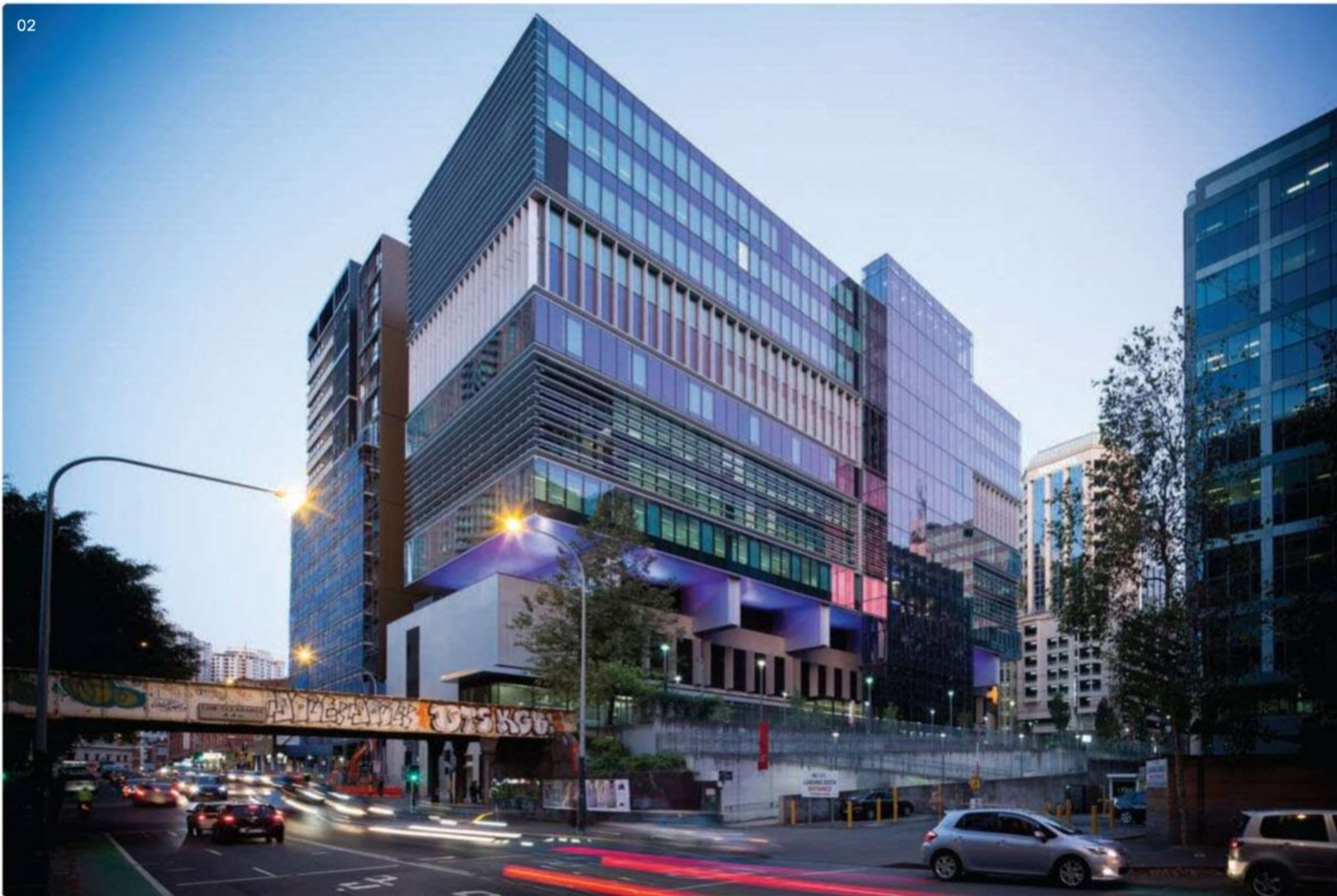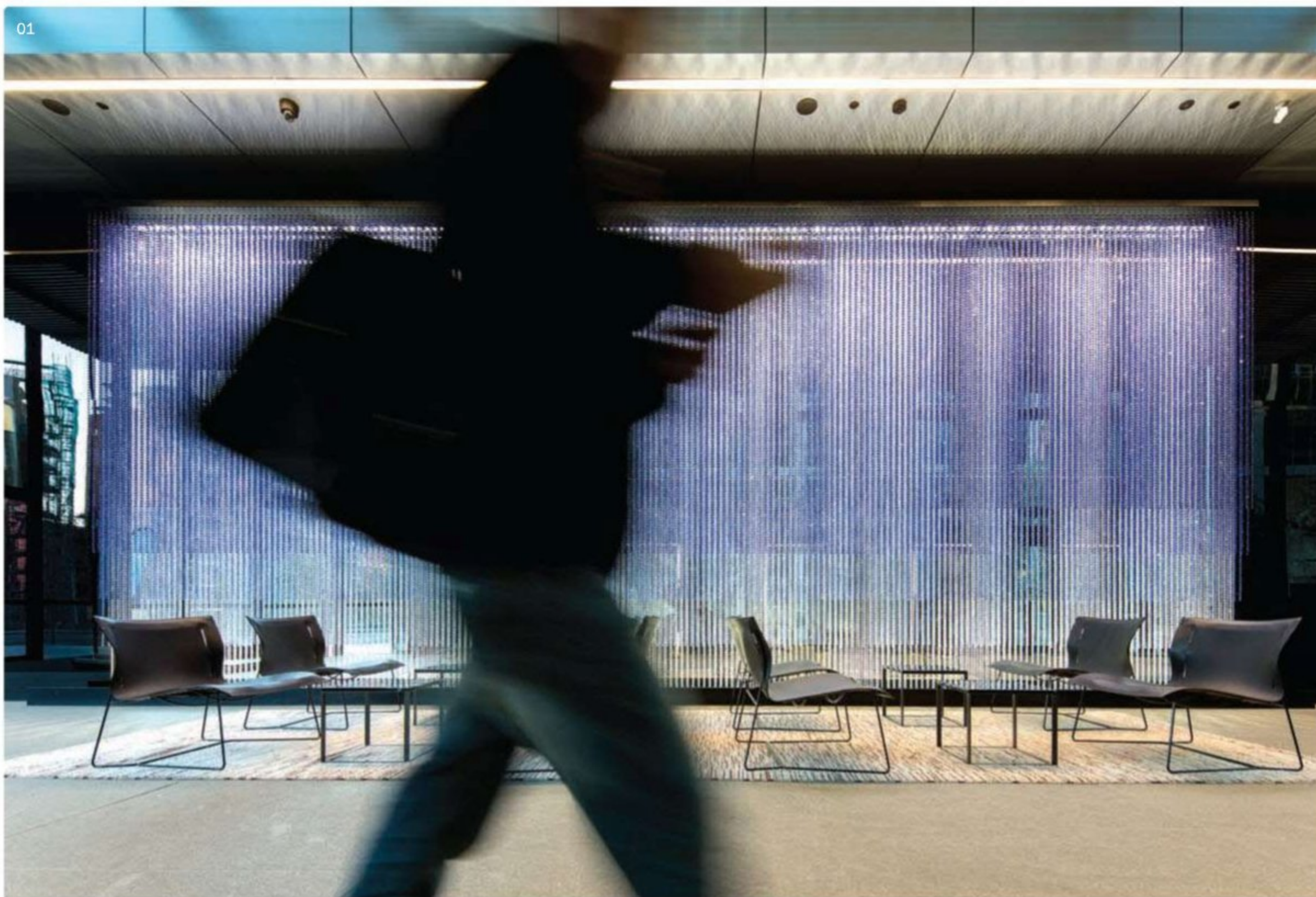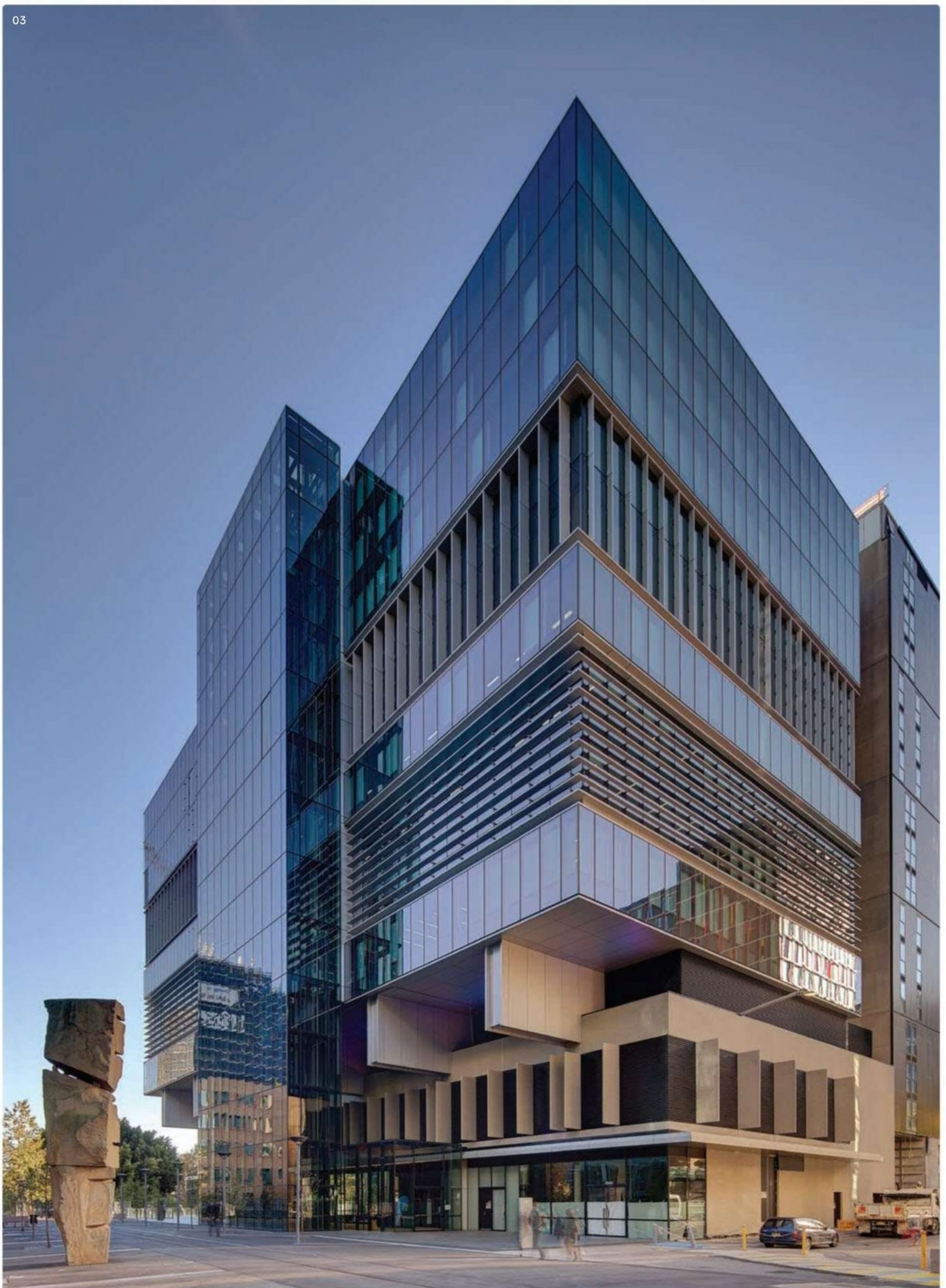
→ (everyone has to have one), allowing the building to engage with what will become a vibrant pedestrian link between Central Station and the new convention, exhibition and entertainment precinct to be built to the north. This gesture capitalises on the site's best asset by recognising its urban condition. Its public nature is further enhanced by a major art installation by Lucas Grogan along the facing wall.

The building sits diagonally across from Frank Gehry's Dr Chau Chak Wing Building, a highly sculptured composition in brick and glass. The Gehry project is located on a tight urban block in a constrained context, which will be greatly enhanced by the civic works of the Goods Line that will soon abut its eastern side, allowing it to open to a generous public realm and to be more visible from the east. City buildings need to respond to their context and fine though it is to have the fame and attraction of a Gehry building in Sydney, it is often not necessary to have a star turn on every corner.

So how should architects respond to such a flamboyant neighbour: challenge or ignore it? Bates Smart has taken a middle path by holding onto its Modernist aesthetic but enlivening it with external modulation. The upper volume glass box has been modelled with a combination of alternating sheer glass and external vertical and horizontal louvres. This patterning follows no particular tenancy requirement and results in a busy facade treatment on the nine-storey office component of a building that is already strongly articulated by its expressed volumes.

The site's north-west orientation allows for the use of horizontal or vertical louvres so to ameliorate heat load. Whatever the best modelling for these elements, the total lack of louvres for five of the nine floors on the western most elevation, points more to pattern-making than effective sun control.

The result is a highly articulated architectural composition and the changing rhythm of the facade does help to moderate the scale of the building. This was, however, already cleverly achieved by the principal move of shifting the major volume to the west, offsetting it from its base and accentuating it with projecting trusses.

All the big moves are right. This is a finely detailed building, crisp, clean and volumetrically appropriate to its context. However as a response to their ostentatious neighbour, Bates Smart has stepped beyond its usual honed Modernism. It could have been a stronger building if it had ignored its neighbour and remained true to itself. **ar**

03. Structural members and louvres provide contrasting verticality and horizontality
04. Sensitive use of glazing reflects the surrounding area interacting with the environment.
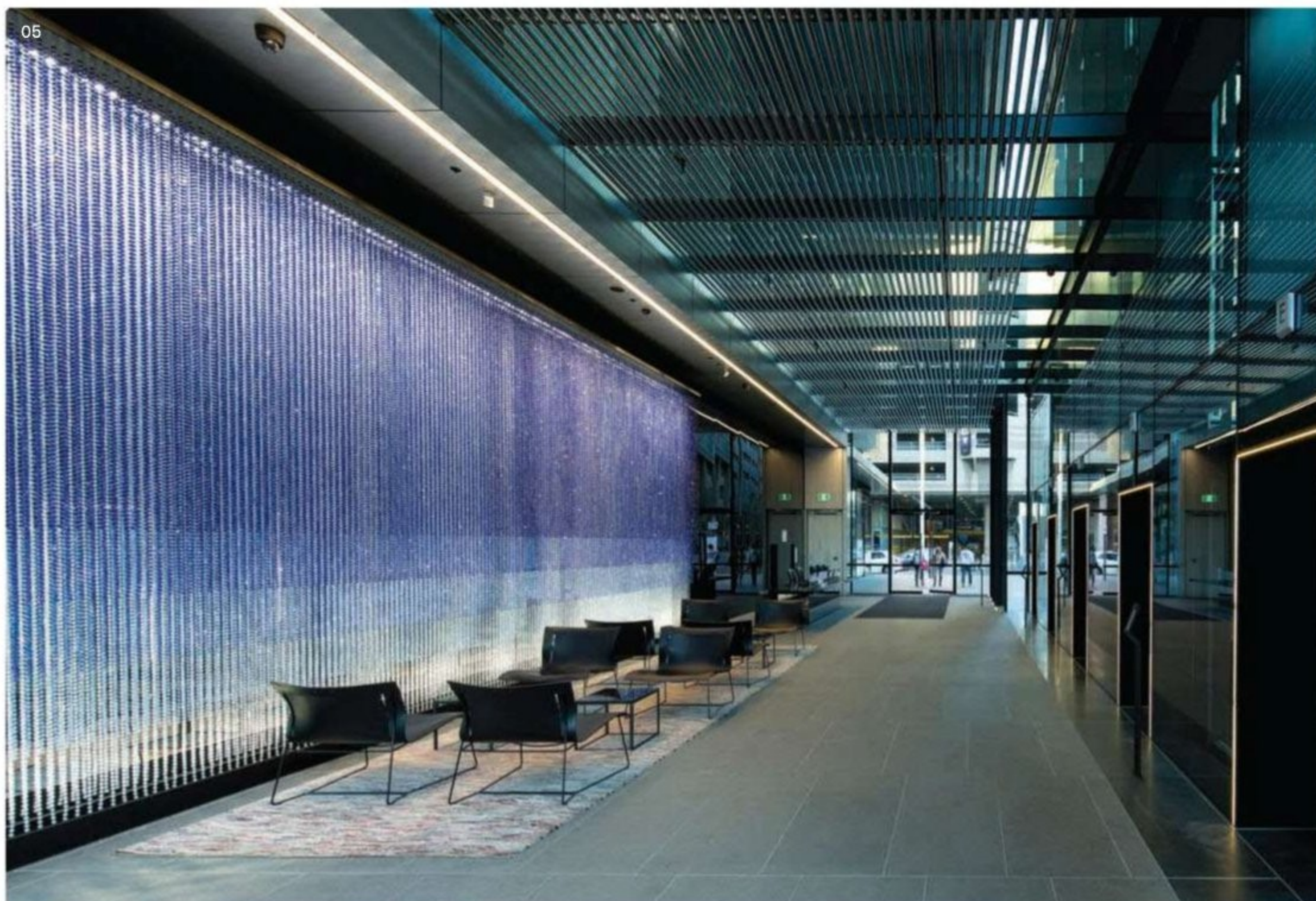
05. Generous internal circulation allows for informal gathering space and movement.

CLIENT: TransGrid / ARCHITECT AND INTERIOR DESIGNER: Bates Smart / PROJECT TEAM: Amy Watkins, Basil Richardson, Brad Dorn, Daniel Chieng, Jonathan Claridge, Julian Anderson, Jung Soo Kim, Marinel Dator, Mark Pellen, Merissa Lam, Olga Kambas, Philip Vivian, Sarah Gilder, Tommy Sutanto / PROJECT MANAGER: PwC / MAIN CONTRACTOR: Built / STRUCTURAL ENGINEER: Enstruct / MECHANICAL, ELECTRICAL, HYDRAULIC, ESD, VERTICAL TRANSPORT, ACOUSTIC, FACADE, ENVIRONMENTAL AND FIRE ENGINEERS: Arup / LANDSCAPE ARCHITECT: Turf Design Studio / PLANNING CONSULTANT: Urbis / ACCESS CONSULTANT: Morris Goding / CERTIFIER: Steve Watson and Partners / COST CONSULTANT: Slattery / ARTIST: Lucas Grogan / ART CONSULTANT: Virginia Wilson / GRAPHICS CONSULTANT: Frost Design / FACADE: Sharvain / PRE-CAST CONCRETE: Hanson / VERTICAL TRANSPORT: Schindler / INTERNAL GLAZING AND PARTITIONS: Kingston Building Group / JOINERY AND INTERNAL SCREENS: H Dallas Industries / LIGHTING CONTRACTOR: Heyday Group / MECHANICAL CONTRACTOR: ACES - Air Conditioning and Engineering Services P/L / BUILDING SIGNAGE: Integrated Signage / ARTWORK: Event Engineering.

Section

specify.caroma.com.au
Caroma

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The site features a number of great tools for architects, designers, specifiers, developers and builders; these include a unique specification tool, complete BIM model library and all the latest product information. To make finding the right project solution even easier, the site also hosts a number of case studies and application packages detailing products to suit a range of commercial projects.
specify.caroma.com.au

Entrance systems
Dorma

Dorma ensures grand impressions first to last with entrance systems created to reinforce architectural and interior design, and engineered for maximum safety and convenience. Dorma revolving doors provide access solutions that ensure safe, secure and easy traffic flow, while aesthetically enhancing the building. That's what the hospitality industry and many other building owners demand and Dorma provides — premium construction combined with unmatched design for entrance and door systems limited only by the imagination. Whether for a high-rise office tower, hotel, casino or a convention centre, Dorma provides customised solutions that perfectly match requirements in both form and function.
www.dorma.com

Graphic
Havwoods

Havwoods has a phenomenally exciting collection of timber for floors, cladding and even joinery (think of unique table tops, planters and doors), but if you want to introduce a little colour, take a look at its brand new Graphic collection. Genuine reclaimed solid oak is planed, profiled and sanded using 21st century production techniques to produce a board that is straight and level for easy installation. This is then carefully painted by craftsmen trained in encaustic painting techniques, resulting in an authentic old board, enhanced with subtle, sophisticated colour, which fits just like a new one and is ideal for both residential and commercial applications.
www.havwoods.com.au

G 6995 SCVi XXL K20 fully integrated dishwasher
Miele

Featuring a sleek and linear design with an elegant new interface, the innovative Miele G 6995 SCVi XXL K20 fully integrated dishwasher is especially designed to complement Miele's Generation 6000 range of cooking appliances to achieve a harmonious total look, perfectly integrated into the kitchen.
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LONDON'S LATERAL THINKING

Research is the bedrock of creativity. The investigations into historical, spatial, aesthetic, geographic and sociological contexts taught to students in architecture and design schools are vital for socially responsive and progressive education. And yet, once those students have left university, that kind of research for the sake of intellectual enrichment, for taking the wide view and coming up with new and exciting interpretations and solutions – as opposed to the normal preparatory investigation every architect should undertake for each project – appears to be an endangered, if not a dying, art within the wider architectural profession.

There are few practices with the overt commitment to broad-ranging research demonstrated by the likes of OMA. Its multidisciplinary research arm AMO aims to 'fertilise architecture with intelligence' from the worlds of fashion, media, politics and sociology, among others. However, it is easier for large global practices, such as OMA, Gensler, AECOM, SHoP Architects, etc. to justify devoting time and resources to stimulating intellectual curiosity within and beyond their practices. Gensler, for example, currently has 33 ongoing research projects, with over 180 participants from the US, the UK, China, Japan, Brazil and India. Its 'Community' sector research topics include the future of the academic library and the development of tools to better measure the performance and human experience of cities. Among Gensler's 'Lifestyle' projects are investigations into how best to create successful mixed-use environments in China's rapidly expanding urban areas. There is also clearly a justifiable benefit to a company's practice when you can circulate your homegrown research findings among a worldwide staff base of over 4000.

Further, many practices have to be of a certain size to secure rare, internationally financed research initiatives such as the EU-funded, two-year Harmonise project, aimed at developing a suite of innovative tools to help create and promote more sustainable and resilient cities. UK-based office BDP is one of the participants, working alongside engineers, sociologists, urbanists and economists to improve the design, planning and infrastructure of cities so that they can withstand natural and man-made disasters.

Project-based research can also play a part in a practice's creative intelligence, as long as the findings and insights arising from it are shared and also developed, as part of the practice's evolution. Grimshaw, with offices in New York, London, Qatar, Melbourne and Sydney, tries to maintain a culture of collective exploration and enlightenment through combining specific project research with deeper or wider investigations, disseminated to its staff through intranet, in-house magazines and seminars. Says Jolyon Brewis, CEO and partner: 'Over the years we've actually conducted huge amounts of very specific research, generally tied to projects and wanting to push the technologies of those projects forward. But a lot of very tangible results have come from that. In the last few years we have also made a conscious effort to be a little freer in the research we do that is not tied to practice, but where there is a level of application, and in areas we have built up an area of expertise.'

Topics currently under deeper investigation at Grimshaw include 'social structures within tall buildings'. In 2013 the company also formed a one-year joint venture with New York's cultural placemaking consultants FutureCity to launch the Urban Research Unit, bringing together a broad range of built environment professionals, along with individuals at the coalface of regeneration planning and implementation, for a series of talks in both New York and London. This led

to the establishment of a one-year masters course at Chelsea College of Art and Design in placemaking.

But, what of the small to medium-sized practices of which the architecture profession is largely made? How do they justify investing in intellectual curiosity when mere economic survival – especially in recent years – has been challenge enough?

For some, research is a tool for differentiation, as well as inspiration. Hawkins\Brown, a London-based practice with 135 staff, launched Think Tank in the spring of 2014. The brainchild of partner David Bickle, and run under the stewardship of Darryl Chen, who also heads up their urban design and masterplanning unit, and Luciana Martinez, Think Tank's research is about pinning a flag to the mast of architecture as a form of engagement with a much broader social, political, cultural and economic landscape. It allows them to interrogate and investigate key themes that affect their practice. Recent initiatives include a post-occupancy evaluation of six of their higher education buildings, the findings of which were summarised in one pithy leaflet, for all to draw on. As noted by Bickle: 'We interviewed our clients, aligned their responses with current drivers of change, which are altering the landscape of education. We came up with a set of conclusions, which directors of estates can measure against their own programs. And we pretty much defined what the state of play is right now.' This clearly could be justified as marketing, building on obvious strengths within the practice's project base to inform and woo potential clients. However, another Think Tank project was more speculative: an examination of the kinds of housing that are emerging from current design guidelines. As Chen outlines: 'We wondered if regulation does produce an aesthetic without even intending to.' Inspired by a survey produced by London's main

forum for built environment professions, New London Architecture (NLA), which revealed that 64 percent of dwellings produced under the new *London Housing Design Guide* were brick and 70 percent had exactly the same characteristics, the Think Tank produced a publication, *The Emperor's New Housing,* which explored how new models could disobey guidelines but offer real solutions to housing issues.

Competitions can be a highly effective mechanism for initiating new thinking and conversations, for smaller practices. Five years ago, London-based Tonkin Liu – then a three-person team directed by Anna Liu and Mike Tonkin – developed an extraordinary technique, Shell Lace Structure, which combines the strength, lightness and resilience of seashells, with the crafted precision of fine tailoring and digital design tools. Both Liu and Tonkin are landscape architects, as well as architects, their passion is to use nature's engineering genius to explore more intelligent, sustainable building solutions. Liu states: 'We discovered this technique when we were invited by Arup to enter a competition for a shelter.' They were unsuccessful in the competition but won the attention of Arup engineer, Ed Clarke, who worked pro bono with the architects over many subsequent competition entries. These allowed them to test and develop the technique with the help of Arup's engineering lab. Success has slowly followed, with one ornamental gate structure commissioned and, more recently, a pedestrian bridge. In 2013, thanks to a small research grant from the RIBA (Royal Institute of British Architects), the office was able to develop the idea further: to produce both an exhibition (which ran at the RIBA through September 2014) and a book.

Ben Adams Architects, another London-based office, with 35 staff, will usually have two or three staff members involved in research at any given point. As

Adams notes: 'It's something we set out to do from day one ... rather than giving it specific time or money we're very much project led. We'll say to our staff: "Look, if there's something you're interested in pursuing, you can write a proposal and if there's an institution willing to sponsor it in some way then we'll back it." Lots of our competitors may have had that ambition and may have started doing research with the best of intentions, but it seems [they] get led into design research around a particular type of building or form or material. It becomes part of what you should do anyway, as a reasonably intellectual design-led practice. There didn't seem to be many practices that allowed people interested in research to go where they needed to go. We invest money in all sorts of non-profitable things and research ought to be one of them because it will bear fruit in all sorts of ways.'

Adams and his associate director Nicholas Jewell balance their own research with practice. Having spent time in China, they are fascinated with the way in which Western building types – skyscrapers, shopping malls, mixed use blocks – are giving rise to interesting cultural adaptations and hybrid typologies, as they are assimilated into Chinese urban landscapes and then served back to the West. Various institutions, in London and China, are looking to work with the pair to investigate this further. The practice is also hoping to set up a small office in Los Angeles, to see what European ideas of sustainable urbanism might translate across to the more car-centric, demolition-happy Californians.

Yet offices such as this are a minority. The RIBA recently ran an initiative to try and generate interest and participation among its membership in a substantial EU-funded scheme, with a pot of €80 billion available over seven years. Horizon 2020 →

→ aims to inspire a wide range of collaborative research projects that will help Europe tackle societal challenges, industrial leadership and excellence in science. Societal challenges, from climate change to community disintegration through rapid urban expansion, are key areas of concern for many architects and urbanists. Yet it seems the only people bidding to be part of this knowledge-enrichment process are the hard sciences.

If there is a reluctance to engage with serious research, Professor Susannah Hagan, research leader at the Royal College of Art fears that it is because architects' dominant preoccupations are currently how to conduct 'architecture as business or how they can claw back the power they've lost or reposition themselves in the centre of the building process'.

Funding is often problematic, she agrees: 'The culture of funding needs to be much more open-minded. I don't know how many times I've heard how important it is to address climate change, for example, without anyone coming up with very imaginative responses.'

Sometimes it is easier to approach the bigger architecture offices for the necessary research cash – Aedas is currently sponsoring one of Hagan's doctoral students, John Zhang, who is examining the system used in China to educate architects and produce buildings and how that impacts on outcomes – the thesis is entitled 'The evolving role of the architect in the production of new Chinese cities'. Zhang combines this research with practice at DSDHA. Also straddling both disciplines is RCA research fellow Dann Jessen, founder and partner at East Architecture. Jessen sees research as a way of enriching his practice, as well as the experience and insight of his students. One of his RCA projects, which has three years' funding from the Research Council, is an

investigation into the role of the architect in the production of public space, examining key projects in London and São Paolo, and comparing cases from the 1960s and 70s, with practice today.

Jessen speaks highly of the research culture within Dutch architecture practice, where research and experimentation find much greater support and connections are actively promoted between academic institutes and practising architects. There is also a more supportive funding structure, with the Netherlands Architecture Institute (NAI) playing a key role in publication and dissemination.

The Sir John Cass Faculty of Art, Architecture and Design – part of London Metropolitan University – has a more European model of integrating research with practice, with live projects conducted via its own, in-house Architecture Research Unit (ARU), run by Florian Beigel and Philip Christou. Beigel developed the model in the mid-1970s, following on from his early architectural education in Stuttgart and his experience working in practice with Frei Otto. The department has conducted major work in South Korea, masterplanning an industrial estate for the publishing industry, Paju Book City. It has designed private residences and new sustainable communities, such as Saemangeum Island City. Christou notes: 'We operate like a real architecture practice, where we hire real people who are graduates. Our office is in the school. We are here daily and we are teaching as well. It's a real advantage to the faculty. It's a process of osmosis. We don't give the same projects we are doing to the students, but we give similar themes, as do other practising architects who are teaching.' The students can then observe the live projects as they develop, learning in real time.

This kind of dialogue between live practice and academic research is the ideal,

says Hagan. 'For us, affecting practice makes a lot more sense than talking to other academics and slowly disappearing up your own fundament.'

An area of architecture where practice and research have really joined forces is in healthcare (and, to a lesser extent, education), with mostly US offices forming fruitful alliances with academic institutions to further their understanding of how design can improve patient outcomes, minimise infection and increase staff well-being and efficiency. The whole 'evidence-based design' movement has sprung from the healthcare sector, largely stimulated by one research-minded architect, Roger Ulrich, whose flagship studies revealed significant improvements in healing rates, where patients have views of nature, compared to those who do not.

Professor Debajyoti Pati, Rockwell Endowment Professor at Texas Tech University, has conducted many pieces of groundbreaking healthcare research in collaboration with architecture practices. He argues that the improvement in building quality that is apparent throughout contemporary healthcare design has been achieved through a shift in thinking, such that clients and stakeholders are beginning to see the physical infrastructure as an asset, rather than a liability. As Pati says: 'Once a team of project stakeholders adopt this perspective ... a parallel substantial increase of research consumption occurs.'

Attitudes to research within the wider architecture profession need to change. Greater collaboration, as well as wider dissemination of research findings, can only help to dispel prejudices and improve output, as well as input. As long as research continues to happen below the radar, buried in professional or academic silos, the benefits of any research will rarely leak beyond the practice or laboratory walls. **ar**

PREVIEW

In Bernard Tschumi's *Architecture and Disjunction* (1994) the relationship between architecture and reality, notably in 'Fragment 7 Metaphor of seduction — the Mask' (p090–091) is explored, noting that 'there is rarely pleasure without seduction, or seduction without illusion. Consider: sometimes you wish to seduce, so you act in the most appropriate way in order to reach your ends. You wear a disguise. Conversely, you may wish to change roles and be seduced: you consent to someone else's disguise, you accept his or her assumed personality for it gives you pleasure, even if you know that it dissimulates "something else".'

The artistic practice of Surrealism is architecture's dark secret. While Expressionism, Futurism, Constructivism and Cubism (Purism) resonate with Modern architecture, Surrealism plays its own part in architectural production and theory from the 1970s onwards. Characterised by representations of searching and finding, of veiling and revealing, presence and absence, thresholds and passages, Surrealism has no clear boundaries or fixed identities; and yet it remains an untapped medium in architecture. While Peter Eisenman supplanted grids in his unbuilt 1978 Cannaregio project and Rem Koolhaas published his populist *Delirious New York* (1978) on the basis of Salvador Dali's paranoid-critical activity, Tschumi developed the *Advertisements for Architecture* series (1976-1977) — a series of postcard size text—image juxtapositions. Surrealism and architecture were late seventies bedfellows — often fantastical and prophetic, creating illusions and concealing identities.

As Tschumi notes, '[Architecture's] disguises are numerous: facades, arcades, squares, even architectural concepts become the artifacts of seduction. Like masks, they place a veil between what is assumed to be reality and its participants (you or I)...once you uncover that which lies behind the mask, it is only to discover another mask...[they] possess a double role: they simultaneously veil and unveil, simulate and dissimulate.'

Similarly, Christopher Nolan's film, *The Prestige* (2006), features a doubling and questioning of identities, as well as the nature of time and perception and game-playing rivalry. His central characters, two stage magicians in Victorian London, aim to trick the audience. Audience deceit, in this instance, is governed by three stages: firstly the 'pledge' (the audience is shown something); secondly, the 'turn' (disappearance); and, finally, the 'prestige' (the miraculous reappearance). It is a mesmeric attempt to deceive and to puzzle, with the public delighting in being fooled and astonished.

If AR138—Margins was read as the 'pledge' and AR139—Disclosure as the 'turn', then AR140 is the 'prestige'.

ar140 PRESTIGE

According to Harvard University professor Homi K Bhabha: 'The arts and humanities contribute to the process of cultural translation by propagating and protecting the "right to narrate" — the authority to tell stories, recount or recast histories, that create the web of social life and change the direction of its flow.' So, if architecture is all about veiled concepts, words and drawings, then what about the identity behind the building: the architect? In AR140 architects appear in writing but will not necessarily be themselves.

Freedom of expression is an individual right and, as Bhabha explains, it is 'the dialogic right to address and be addressed, to signify and be interpreted, to speak and to be heard, to make a sign and to know that it will receive respectful attention'.

AR140 examines the idea of the concealing mask and the ability (and right) to be heard. It builds on its three previous editions by first outlining the problem, then exposing the illusion and, finally, by offering some solutions.

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